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THE EVOLUTION OF EDUCATIONAL THEORY

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THE EVOLUTION
OF
EDUCATIONAL THEORY

BY

JOHN ADAMS, M.A., B.Sc., LL.D.

PROFESSOR OF EDUCATION IN THE UNIVERSITY OF LONDON

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THE SCHOOLS OF PHILOSOPHY

A HISTORY OF THE EVOLUTION OF PHILOSOPHICAL THOUGHT

BY VARIOUS WRITERS

EDITED BY SIR HENRY JONES

PROFESSOR OF MORAL PHILOSOPHY IN THE UNIVERSITY OF GLASGOW

THE first and the most natural consequence of a historical survey of philosophic thought is to induce despair of philosophy. It presents us with the spectacle of the human mind endeavouring to understand the central facts of experience, and failing, in every age and every country, to give an indisputable or final explanation of any one of them. The only reward of historical research in this department seems to be a collection of inconclusive and mutually inconsistent opinions, inflated into theories of a reality which exceeds man's utmost powers to comprehend.

But if we turn from the philosophy of life to that life itself a pause is given to our despair; for the actual experience which philosophy seeks to explain presents the same features of incompleteness and postponed achievement. Nowhere is there finality: not in the world of economics wherein man seeks to satisfy his physical needs, and much less in the sphere of morality, or politics and statecraft, or in religion wherein he

seeks to fulfil his spiritual wants. But it is recognized that in these fields of practical activity the fixity of final achievement were of all things the least desirable, and that movement onwards, through the exhaustion of error and the expansion of the ideals of the good and the true, is man's best destiny.

It is evident that in so far as Philosophy gives a true presentation of the central facts of experience, it must partake of this movement, and its History will be the articulate expression and record of the successive phases of the growing experience of mankind. It will offer no solutions which are not hypotheses, no conclusions which are not premisses, no goals which are not points of new departure. But, on that very account, it will give the sense of movement which its theme demands ; and of the most secure of all movements, namely, that which deepens the significance and widens the application of its main hypotheses, through the exhaustion of error and the antagonism of the critic and sceptic.

The literature of philosophy in this country is rich in many respects ; but it contains no History of Philosophy which is based on this conception or which presents with even approximate adequacy the evolution of the central conceptions of human experience. We have nothing which we can compare for a moment with such works as those of Hegel or Erdmann. Teachers of philosophy have to refer the students of its history to translations ; and translations, however satisfactory otherwise, are always to some degree alien and repellent.

It is the aim of the present series to remove this defect and to give to English readers of philosophy a history of the movement of philosophical thought whose appeal is

more intimate than any which can be transmitted through a foreign medium.

It is intended that the series shall comprise :

(*a*) The History of Greek Philosophy as one continuous development.

(*b*) The History of Modern Philosophy in parallel movements from Descartes to Kant, and from Hobbes to Reid ; and from Kant through his Idealist successors on the one side, and through his Naturalist successors on the other.

(*c*) The Application of Philosophy

(1) in Educational Theory,

(2) in Political Theory.

The Evolution of Educational Theory, by Professor John Adams is now ready. *The History of Greek Philosophy from Thales to Aristotle*, by Professor Burnet, and of *Modern Philosophy from Hobbes to Reid*, by Professor Stout, will be published shortly. To follow are the history of philosophy *From Descartes to Kant*, by Professor Latta ; *Hegel and his Idealist Successors*, by the Editor, and *Political Philosophy*, by Dr. R. A. Duff.

It is hoped that the series will be completed by the addition of other works, including the later history of Greek Philosophy, the history of Mediaeval Philosophy and the history of the evolution of Naturalism in Kant and his successors.

HENRY JONES.

CONTENTS

CHAPTER		PAGE
I.	The Nature and Scope of Educational Theory	1
II.	The Data of Education	41
III.	The Historical Aspect of Educational Theory	72
IV.	The Prehistoric Stage	104
V.	The Social and the Individual Aim in Education	128
VI.	Specific Education	162
VII.	The Educational Organon	186
VIII.	Humanism	229
IX.	Naturalism	250
X.	The Idealistic Basis of Education	283
XI.	The Mechanical View	310
XII.	The Educational Outlook	356
	Index,	402

CHAPTER I

THE NATURE AND SCOPE OF EDUCATIONAL THEORY

To the plain man there is something sophisticated about *theory*, which he contrasts disadvantageously with the simple straightforwardness of practice. He does things and admires others who do things ; but he looks askance at the man who insists upon reasoning about how things ought to be done. He regards theory as something abstract and vague, having indeed nothing to do with the genuine business of life, and accordingly does not realise how intimately associated theory and practice actually are. No doubt it is true that as the man of action exaggerates on the one side, so the man of thought is inclined to go to excess on the other, and is not always guiltless of the vagueness and ineffectiveness of which he is accused. When divorced from practical life theory is necessarily one-sided and incomplete. It has to be reached by the careful examination and comparison of facts. The man of theory is not a dreamer: he is the man who understands and evaluates facts, the man of insight, the man who sees life clearly, and sees it whole.

With Plato theory meant the divine vision. The theorist was the man who had reached the summit of the pyramid of knowledge, and from this vantage point could contemplate with full comprehension all particulars and their inter-relations. The movement of the Platonic dialectic is from the beauty of physical things to the beauty of spiritual things, from the mastery of the particular to the comprehension of the universal. The Platonic scheme of ideas

illustrates the development of theory in general, and the ultimate danger to which all theoretic process is exposed. The dialectic by which Plato seeks to attain his theoretic goal is active throughout. In passing from stage to stage of the hierarchy of ideas there is continuous movement, till at length the highest point is reached in the Good, and thereafter the need for movement ceases. Theory is not active: it is the satisfied contemplation of results achieved.

There is no real harm in thus regarding the ultimate goal of theory as passive, since from the nature of things it is impossible for us ever to attain that stage at which we can be content merely to contemplate our results. We never can attain the summit of the pyramid of knowledge, so we are never left without the stimulus to further activity. In our case as in Plato's, there is no lack of effort in our strivings to attain to ever higher standpoints from which wider views may be had. Every new stage we reach enables us to explain much that was hitherto beyond our comprehension, but at the same time each advance brings with it a fresh group of problems. The vision implied in theory is ever widening, but in human experience can never include the whole circle of knowledge. For us, therefore, theory must ever remain active. We are continually encountering new facts and attaining new points of view: we are ceaselessly raising fresh difficulties. Thus we are always kept in touch with the real of life. To be wisely theoretical we must be intelligently practical.

There is indeed a certain difficulty in distinguishing between theoretical and practical philosophy. Practical philosophy has in view a certain end to be attained, but it is not altogether without theory. On the other hand, theoretical philosophy does not concern itself with practice, but rests content with mere speculative or contemplative knowledge.[1] The terms *theoretical* and *practical* must be regarded as correlatives, neither being quite intelligible save in relation to the other. In practical philosophy, theory is subordinated to the direct application of its

[1] Cf. Sir William Hamilton's *Lectures on Metaphysics*, vol. i. p. 174.

principles, whereas in theoretical philosophy it occupies the whole field, and has nothing to do with practice.

It may seem as if education cannot be regarded as purely theoretical, and some teachers are inclined to maintain that, in their practical work, there is no need for a theory of education, and no place for a theory that has nothing to do with practice. But it is quite conceivable that education might be treated as a mere branch of theoretical philosophy, studied for its own sake, and of no direct practical value. In point of fact, some of the modern treatises on education might be quite fitly classed as theoretical in this sense.[1] But though theory may be treated apart from practice, it does not follow that practice can be safely carried on apart from theory.

In the Aristotelian sense, to be sure, education is a practical science as opposed to a theoretical, and is subordinate to the science of politics. The educator must take his orders from the statesman, because the statesman has to use the material that the educator has prepared. Politics is architectonic to education. In modern states it cannot be denied that this is the principle on which education is conducted. In sober truth the educator has to take his orders from the statesman: but this does not in any way justify the assumption that the determination of the educational end does not belong to the theory of education. It only means that the statesman, as representing the science of politics, has usurped a part of the functions of the educator. The statesman who legislates on education is to that extent an educator, and if his legislation is intelligent, it is because he has mastered at least a part of the theory of

[1] In some of our universities the subject of education forms a part of the degree course and is taken by students who have no thought of becoming teachers. They take the subject for its cultural value, its value as mere knowledge. In one of the English universities at the present moment it is being considered whether there should not be established an M.A. in education, the qualifications for which should be purely academic and divorced from all practical considerations. Education, it is claimed, is by itself of equal rank with any other branch of speculative philosophy.

education. Indeed the war may be carried into the enemy's country, for so far as Plato and Aristotle are concerned the main business of the state is to educate the citizens. The state for them was definitely an educational institution. The relation between the educator and the statesman in Aristotle's sense and in our modern sense must be distinguished. They are opposites. For Aristotle and Plato the fact that man is a teacher of virtue and wisdom is what makes him (or controls him as) a statesman.

Like all the other studies that deal with the organic, education has to depend upon a large number of sciences for help, but it is none the less a study by itself with an independent range, and definite aims. It is not a mere practical science in the sense of a mechanical application of principles laid down from without. It has its theory as well as its practice.

It is true that methods may be put into practice without any explicit theory on the subject, while on the other hand one of the commonest complaints against theory is that it is so difficult to reduce it to practice. Indeed, the terms theoretical and practical so far from being treated as correlatives in ordinary speech are frequently employed as antitheses to each other. While we have seen that the practical person is apt to speak disparagingly of theory, the theorist despises the work of the other as mere rule-of-thumb. In the ultimate resort, sound theory must justify itself by successful practice, while successful practice will always be found to be based upon sound theory, though this theory may not be consciously formulated. It is difficult to imagine anything more unintelligent than the attitude of some practical persons towards theory. They appear to believe that their successful practice has somehow got rid of theory, the truth being merely that they have not taken the trouble to bring to clear consciousness the principles on which they have worked. Even when they have taken this trouble they are no further forward, because they fail to see that the result is theory. Since it is so directly related to practice they do not recognise it *as* theory.

To their minds it is a part of practice. But it is theory none the less: for theory after all is only the rational aspect of practice. It is related to practice as science is to material events; and leads to mastery in the same way.

Wherever there is practice there is implicit theory, though by the very nature of the case the theory cannot become explicit till there has been reflection upon the process implied in the practice. It would seem that theory arises naturally out of practice, for though nothing practical can be done without some previous knowledge of the end to be attained, and some notion of the means by which it is to be attained, it is usual at the earliest stages to give most attention to the practical, and to leave to a later period the consideration of the reasons for our actions. We are not to suppose, however, that our progress consists in an uninterrupted advance from practice to theory. The two are continually reacting upon each other. Hence it is that writers give contradictory reports on the priority of practice.

"Educational theory is the what and the why and the how of teaching; and it is always in advance of practice."[1]

"Theory is the last word, not the first. Theory should explain. It should take successful practice and find out what principles condition its efficiency; and if these principles are inconsistent with those heretofore held, it is the theory that should be modified to suit the facts and not the facts to suit the theory."[2]

It is not difficult to reconcile the apparent contradiction. Jones, taking education at its present highly developed stage, finds that there is a great mass of traditional practice that is quite satisfied with itself and that imposes itself upon all educators. The whole prestige of the accomplished fact, all the *vis inertiae* of established custom resist change whether for better or for worse. In such a case

[1] W. Franklin Jones: *Principles of Education*, p. 284. Cf. Plato's: "It is in the nature of things that practice should fall short of the truth of theory." *Republic* 473A: quoted by Edward Caird, *The Evolution of Religion*, vol. ii. p. 370.

[2] W. C. Bagley: *Craftsmanship in Teaching*, p. 80.

all hope of improvement must come either from chance happenings or from the efforts of those who have thought out educational problems, and insist upon their theoretical conclusions having the test of practice. On the other hand, theoretical considerations are based upon experience of some kind or other. What Bagley resents is the theorising that is carried on *in vacuo*. He rightly maintains that theory must be continually corrected by reference to actual practice. But this is not quite the same thing as to maintain that practice must under all circumstances precede theory. There are occasions on which theory must lead. The development of any process such as education, that involves the application of thought to action, may be not inaccurately described as consisting in an alternation between the influence of theory and the influence of practice. Practice corrects theory, and theory improves upon practice. Both are present at all stages of educational development.

Theory is not a mere description of practice, though it is that among other things. It is, to begin with, a critical examination of the experience gained in practice. But then it goes on to evaluate processes and suggest improvements. In its turn it submits its findings to the test of practice, so that there is a continuous series of tests and criticisms and suggestions. But, on the whole, practice supplies more criticism and testing, and theory more initiation and suggesting. Theory really plays around practice: it neither leads nor follows exclusively. It is now busy making suggestions, but by and by it will devote its attention to analysis and investigation of things as they are. True living theory is continually alternating between the forward and the backward glance. Now it turns forwards in anticipation with a view to initiation; again it harks backwards to review facts in order to explain them. It is this ceaseless activity that makes progress possible. From the educational standpoint it may be said that practice stands for the conservative processes, theory for the progressive.

The fact is, that in the ultimate resort there cannot be anything but a purely artificial distinction between practice and theory, willing and thinking. Practice is thinking in every fibre of it. When we theorise we have a different purpose, but it is a practical one, and involves will. Ordinarily we put the fact in a wider content when we theorise, and in a sense seek a remoter end than when we use the fact practically. The question of precedence between theory and practice involves a discussion that can result in very little advantage, as will be evident to those who realise the inherent interdependence of the two. If, while admitting the ceaseless interplay of theory and practice, we insist on determining which of the two is practically prior to the other, it would seem that preference should be given to practice. It is true that when we set about some entirely fresh enterprise—for example, the commercial exploiting of some new scientific discovery—it may be that we have to do all our theorising before the scheme can be launched at all. So too with those schemes that are condemned under the epithet *doctrinaire*. Yet even here the theorising is justifiable only to the extent to which it can be said to be reconcilable with the results of practice, so far as these are known to the theoriser. When we go back as far as we can to the beginnings of processes that involve a combination of action and reflection, we seem to find that action precedes reflection. The baby performs many unprofitable actions before he is able to select those that meet his needs. Throughout organic development the process of advancing by trial and error is sometimes said to be a movement from practice to theory, in a more or less metaphorical sense, for there is no need for real conscious reflection on the result of certain physical activities. Indeed, it is quite commonly said that the ordinary course is to begin by doing, and to reason afterwards. At the earliest stages of human development the order certainly appears to be action, then reflection. Yet a careful analysis of all the facts will show that the only result of an attempt to settle the historical priority of theory and prac-

tice, is a demonstration that from one point of view theory is first, and from another practice. From one point of view the commercial enterprise referred to above implies theorising and making a scheme before the undertaking is launched. From another point of view the theorising implies the comprehension of the previous practice. So from one point of view the baby acts before he thinks, from another point of view his thinking is quite as real and as definite as, and is altogether on a par with, his action—for his action is not that of a machine, but strikes inwards. A machine could not learn from its actions ; the baby does, and this implies a record of experience and a manipulation of that record. The fixing of priority in any particular case is all a matter of the point of view. It is true that, as a rule, mere living involves an advance in theory and practice. When experience grows richer in content, and more ample, it also gets more differentiated, and then the contrast between action and reflection, like all other contrasts in spiritual life, becomes deeper, and the distinction between theory and practice becomes more marked. But at no stage can we give absolute precedence to one or the other, apart from the limitations of point of view.

The beginnings of educational theory are preceded by a stage at which people carry on education without reasoning about it. As soon as the educator realises that he has certain ends in view in the process, there is incipient theory for him, while from the point of view of the historian of education there is theory implicit in the process from the very first. The parent or the primitive statesman wants a particular result from education, and is content to take the readiest means of attaining it. By and by reflection arises and as a consequence we have a crop of theoretical speculations. These are at first vague, but as they gradually clarify themselves they leave room for the development of a general theory that triumphantly justifies the claims of the practical man, explains current practice, corrects errors, and gives guidance for the future.

In discussing the relation between theory and practice, we must remember that though there is a body of professional teachers, it does not follow that this body has a monopoly of educational theory. In point of fact some of the best work in theory has been done by non-professional persons. Diderot here supplies us with a useful classification :

"In every science as well as in every art there are three quite distinct parts : erudition, or the setting forth of its progress, its *history* ; the speculative principles with the long chain of consequences that one deduces from them, its *theory* ; the application of the science to use, its *practice.* Erudition or the historical part more or less extended belongs to all. The science, or the sum of the knowledges that constitute it, and the practice are reserved for professional people (*gens du métier*)." [1]

In education there has been a strong tendency for the outsider to pass beyond his legitimate sphere of erudition, and dabble in the mysteries of theory. The monopoly of the *gens du métier* has not been respected. For this there are two reasons. First, the study of education has not in the past been carried out in such detail as to lead to the abstruse results that repel the layman from intermeddling with the recognised sciences. Education as an undeveloped study offered an attractive field for the amateur. The second reason is that the professional people themselves were so little given to elaborate theory that there was an open field for the outsider. The *gens du métier* have had a tendency to confine themselves to the practical side.

In actual experience we find a tendency to separate the practical from the theoretical in a distinction that is sometimes drawn, and for practical purposes rightly drawn, between teaching and educating. Education is usually regarded as something deeper and finer than mere teaching, which is limited to the communication of knowledge, or the imparting of skill. In point of fact, however, we observe no great anxiety to emphasise this distinction.

[1] *Plan d'une Université.*

On the contrary, there is an increasing tendency to regard the practical teacher as in some sort an authority on education. This tendency requires explanation, since teaching after all is only a part of education. Sometimes indeed it is recognised that there may be a certain opposition between the two processes; as, for example, when a particular method of teaching is described as uneducational. The meaning here is clearly that the method in question, whatever its result in the mere communication of knowledge, does not produce good results on the nature of the person who is being taught. There is further the implication that education is confined to the development of the pupil in a direction that is satisfactory to the teacher and to those who employ him. In the ultimate resort all the methods of a teacher have an educational effect, just as have all the other elements of the pupil's experience. From the wider point of view, the work of the teacher is lost among the many influences that have their play in the educational process. How subordinate is the teacher's rank under the broad definition of John Stuart Mill, who tells us in his rectorial address to the University of St. Andrews (1867) that Education includes

> "Whatever we do for ourselves, and whatever is done for us by others, for the express purpose of bringing us somewhat nearer to the perfection of our nature; it does more: in its largest acceptation it comprehends even the indirect effects produced on character, and on the human faculties by things of which the direct purposes are different; by laws, by forms of government, by the industrial arts, by modes of social life; nay, even by physical facts not dependent on human will, by climate, soil, and local position."

In spite of the elaboration there is nothing here that is inconsistent with the views of the plain man in respect of education. The point of divergence is the apparent suppression of the personal educator. But though some of the educational organa recognised in the definition are explicitly stated to be independent of the human will, it does not follow that they are independent of all will. We

may be thrown back many steps in the educational process before we reach the real educator, but he is there all the same, and must be assumed if the process is to have any meaning at all. So long as we think of education as something different from mere chance happenings, we must postulate a will somewhere behind it. Even when we get to the purely evolutionary thinkers who reduce the development of the world to a process of interaction of impersonal laws, we find the popular view of education respected ; for we cease to use the term when we are dealing with merely cosmic change. We do not speak of educating a watershed to perform its functions. We do not even speak of educating any animal organism from a lower to a higher stage. The physical evolutionists studiously avoid the personal note.

Mill himself recognises that for practical purposes his definition is too wide, for he restricts it in the same address to the following :

"The culture which each generation purposely gives to those who are to be its successors, in order to qualify them for at least keeping up, and if possible for raising, the level of improvement which has been attained."

Here we have the recognition of the need for deliberate intention, the presence, in fact, of the personal element.

To this class of work under modern conditions, there is set apart a professional body of persons who are specifically marked off as teachers, and the fact is thus emphasised that in the popular consciousness education is carried on by means of communicating knowledge. There is a general understanding that schools are places where the young are taught certain things, and *therefore* educated. Exceptional men like Mr. Bernard Shaw may complain that their education was interrupted by their schooling, and they are no doubt right ; but the plain man takes it for granted that knowledge is the essential educational organon, and that school is the place where this organon can be most effectively applied.

When we look into our educational terminology we find a significant lack that illustrates this point. *Teacher* and *educator* are words representing the active agents in teaching and educating respectively. Each, therefore, requires a correlative word to represent the passive side, the person who is acted upon. Yet we find that there is only one correlative available : the word *pupil.* The very fact that this one word has for so long served the double function of representing the person taught and the person educated is a clear indication of the prevalence of the belief that teaching is essentially educative. Since, however, the communication of knowledge is only a part of education, it is highly desirable that we should have a real correlate to each of the words *educate* and *educator.* In actual practice we do not find that the word *teach* is used in an ambiguous way. It always preserves implicitly the need for that double accusative granted by the Latin grammar. We never merely teach a person ; there is always the implication that we teach him something. Even when Gideon taught the elders of Succoth "with thorns of the wilderness and briers" he taught them something. He taught them manners. He could hardly be said to have educated them, though we have here the most favourable example for this possible use.

Many teachers object to the word *educator* as pedantic, and a smaller number object to it as signifying something more than is implied in the duty of a mere teacher. In any case it is clear that *teacher* and *educator* are not interchangeable terms, they are not synonymous. Since they represent different things it follows that we lose in clearness of thinking if we do not bring out the difference in our technical vocabulary. It is necessary to find a suitable correlate to *educator.* In the meantime, the writer who is dealing with education, as distinguished from mere teaching, has to fall back upon some such periphrasis as "the person to be educated," or "the person being educated." At the early stages of educational theory it may have been pardonable to use such cumbrous phrases.

But it is remarkable that in the evolution of educational theory a double work should have been so long demanded from a single term.

It has to be admitted that this lack of an essential word has not gone entirely unobserved; for on referring to Sir James Murray's *Historical Dictionary of the English Language*, it will be found that the word "educatee" does occur, with the explanation, "one who is subjected to the process of education." But it is accompanied by a note in italics that describes it as a "nonce word," that is, a word that has not justified its claim to a place in the language, but has been used by some writers for the nonce to meet a passing need. It is only occasionally, and in unimportant connections, that the lack of the correlate has been felt. In the two examples of the use of the word "educatee" supplied in the dictionary just quoted, one cannot help finding a somewhat contemptuous connotation. Like a triple rhyme, words ending in "ee" suggest a flippant context. There is usually in such words a lack of philological justification.

In dealing with educational subjects there must be many occasions on which it is necessary to refer to the passive partner in the process, and since education is not limited to the case of pupils at school or college there is an imperative need of a proper term. In seeking for a word to express what is meant, we find that we can appeal to the respectable authority of the Latin grammar, where we discover just the form we desire in that ending in *-ndus*. The *educand* literally means the person that ought to be educated, or that is suitable for, or worthy of, education. Objectionable as are neologisms, it may be permitted to recommend the use of a term that so accurately represents the idea intended to be conveyed, an idea for which we have at present no word in English. Besides, the term, after all, is only a revival. It was never current, but it was used by some writers. Thus in William Petty's *Advice*, dated 1648, we find the words "that the educands be taught to observe and remember all sensible Objects and Actions."

The word was used in a serious way, unlike "educatee," so that it had its chance, like any other word, of establishing its place in the language. That it did not succeed in making good its claim to a permanent place can be explained only on the assumption that the study of education was not sufficiently developed to make the term essential. No one can write much at present on the subject without being hampered through the lack of a word to express exactly what is covered by Petty's term. To use the word *pupil* as a correlative to both teaching and educating is to beg a whole series of questions that it is the business of the writer or lecturer to answer.

That education is not by any means confined to the school is shown by the very words used to express what we ordinarily understand by the term. Among the Greeks *παιδεία* meant primarily the rearing of children. The German *Erziehung* and the French *élever* have the same fundamental meaning of rearing or bringing up. The familiar American form "to raise" is exactly equivalent to the French and German terms. So literally does *élever* limit itself to the actual rearing of children, that Littré applies, within brackets, the word *allaiter* as an equivalent. The word *education* in itself rouses hopes, since by its very derivation it suggests a theory. But, so far as French is concerned, we are disappointed, for we find the depressing note in Littré: "*éducation* is a recent word: formerly one said *nourriture*."

Yet everyone who has had occasion to dip into books on School Method is familiar with the tiresome discussions about the derivation of the word *education*. The popular, one might almost call it the orthodox, derivation runs: "*e* = out of, and *duco* = I lead." From this derivation a whole theory of education is sometimes evolved. The young teacher is warned that his main business is to draw out rather than to put in. The pupil is to be told as little as possible, and knowledge is rather to be "elicited by skilful questions" than communicated to him. It annoys the writers of such manuals when it is pointed out that there

is a certain Latin verb *educare* that meets all the needs of derivation, and yet carries with it no more elaborate theory than we can spin out of *élever*; for among the meanings of this word *educare* is the usual "rearing of children." Among the meanings of *educare* given in Latin dictionaries is "to bring up a child physically or mentally." The dictionary certainly does its best to keep the educator humble.

The "*e* = out of" theory is not confined to professional teachers. It has spread among laymen. We find Edward Burne-Jones writing:

> "Education is a pretty enough word if it is taken literally, and intended to mean an influence that leads forth something that is already in one, but they seldom mean anything so nice as that. By the present way people's faculties are more often stuffed up than drawn out. Inducation is rather the word that represents it. People ought to get into the habit of saying, quite in an ordinary tone of voice, 'My boys are being inducated at Eton.'"[1]

There is here more than verbal criticism. We are dealing with what education is or ought to be, rather than with the mere derivation of the word. The school-manual derivation owes its influence to the fact that it is countenanced by a view of education that is sound. Burne-Jones emphasises the distinction between merely supplying information on the one hand, and on the other using knowledge in such a way as to modify character. The complaint really is that boys are being taught but not educated. The invented word *inducation* is used to bring out the fact that, in our existing system, teaching is not distinguished from education. We have seen that all a teacher's methods must have an educational effect, just as have all the other elements of the pupil's experience. Education includes teaching as the greater includes the less, though to judge by popular speech one would almost be led to suppose that it was the other way about. A well-educated man is usually understood to be a well-informed man, a man of wide knowledge.

[1] *Memorials of Edward Burne-Jones*, vol. ii. p. 324. (Year quoted 1897.)

It is in this sense that Aristotle is sometimes said to be the best-educated man the world has ever seen. On any other view, the compliment that is obviously meant for Aristotle himself would have to be carried back to Aristotle's teacher, Plato, for the teacher is clearly responsible for the education of the pupil, when the term education is used in the sense of a process that modifies Character. In this latter sense of the term Alexander may be said to be more entitled to the term well-educated than is Aristotle, though in respect of mere knowledge the pupil never even approached his master's level. Yet Hegel, speaking of Alexander, tells us:

"Aristotle left this great nature untrammeled as it was before his instruction; but impressed upon it a deep perception of what the true is, and formed the spirit which nature had so richly endowed, to a plastic being rolling freely like an orb through its circumambient ether."[1]

Education has for its aim to modify the nature of the educand, and not merely to supply a certain amount of knowledge.

As suggested in the last paragraph, the knowledge-mongering theory is based upon an exaggeration of a principle that is in itself sound. Nurture forms as essential a part of true education as does what is usually called training.[2] Instruction is in truth of fundamental importance in education, though it cannot stand alone. Knowledge must be used as a means towards an end. It is true that there are certain kinds of knowledge that may be said to be of use in themselves, and apart from any effect they may have upon the character. Subjects that are merely ancillary to other subjects are of this nature, subjects that Sir John Lubbock (Lord Avebury) would include among his "knife and fork studies." Even here, however, it is doubtful whether the distinction will really hold, for, as we shall see later, what is a knife-and-fork study at a given stage may well have been or become a culture study at another.

[1] *Philosophy of History*, part ii. sec. 2.

[2] For a treatment of this term see p. 201 ff.

In fact, we cannot reasonably separate knowledge from the knowing person. The very grammatical function of the verb "to teach" with its double accusative, drives us to the conclusion that the process becomes meaningless if we try to deal with the subject taught apart from the person to whom it is taught. Whether he will or no the "mere" teacher is to this extent an educator. How far he is a genuine educator in the technical sense, that is, how far he deliberately seeks to modify the pupil's character in a given direction is another question.

So far as the general public is interested in the matter at all, it is inclined to admit the teacher's claim to be an educator. It is only too willing to hold him responsible for the conduct of his pupils after they leave school. He is taken to task for producing the Hooligan and the Apache, or at the very least for not preventing their production. Probably too much is expected of the school. The public has an almost Red Indian belief in the marvels that can be worked there. We have no less an authority than Max Müller's for the statement that the words used by the red men to signify a school may be literally translated: "a stopping place where sorcery is practised."

Every good teacher will prefer that too much rather than too little should be expected from the school, and will welcome the growing reaction against the view that it is a mere knowledge-shop. Still, he knows that teaching and education are not synonymous, and should be anxious to keep them clearly distinguished in the interests of the exact thinking that should guide intelligent practice. The teacher's business is both to instruct and to educate, and it is a pity that there is not a suitable term that includes both processes. One is inclined to throw covetous eyes at the French language that possesses, according to Professor Alexis Bertrand, just the term we need.[1] But it is to be

[1] *L'Enseignement Intégral*, p. 19. "Dans le mot 'enseignement' l'instruction et l'éducation sont comprises l'une et l'autre ; enseigner ce n'est pas dresser, c'est élever ; c'est forger un esprit, et non manœuvrer une machine à apprendre et à retenir."

feared that he does not carry with him the great body of his countrymen when he makes *enseignement* cover both instruction and education. So we had better content ourselves with keeping *education* for the wider, all comprehensive term that includes teaching or instruction as a part.

The close connection between the teaching process and the educative becomes clearer when we realise that they have in common a characteristic that may be called bi-polarity. In both cases there are two forces concerned, both imply an active and a passive member: there is the teacher and there is the pupil, the educator and the educand. The interaction between these pairs is essential to teaching and to education. There must always be a teacher-or-educator pole, and a pupil-or-educand pole.

It is true that there is the danger of allowing a fallacy to creep into our thinking through an insistence upon the correlation between the educator and the educand. While the educator plays the active part and the educand the passive in the process of education *as such*, we must not let the passive form of the word *educand* blind us to the fact that in education the person to be educated must necessarily bestir himself. One of the most pestilent heresies in education is this very notion of the passivity of the educand. He is certainly the object upon which the educator acts; very frequently he is entirely in the power of the educator; in certain circumstances he can be none other than what the educator determines that he shall be. But it does not by any means follow that he is, as a human being, passive. It is of the very essence of successful education that the educand should be kept in a state of activity. To save the educand either time or trouble over his work is no part of the educator's plan—unless, indeed, the time or trouble would be spent uneducationally. It is one thing to choose the proper kind of work for the educand: it is another to seek to save him from all work. It is only too easy to keep the educand busy all the time, and the educator runs great risks if he does not make a careful selection of the material on which the educand is to expend his activity:

but it is of the essence of the process of education that this activity should be expended. A great part of the educator's work is to stir up the necessary mental and physical activity on the part of the educand. So far as the educand is a living developing being he is active in the process of education, though in the regulation of the process he plays the passive part. In the educational process as educational process the educator is active, even when he appears to be doing little. The cavalry drill sergeant who stands still in the middle of the riding school, and uses only his tongue, is educationally active, while the recruits who career violently round the ring are educationally passive.

But in the course of a prolonged period of education there is a gradual redistribution of activity between the educator pole and the educand pole. For in the educational process as such the educand may begin to take a share, in so far as he realises the purpose of education, and seeks to aid in the process. The pupil who does no more than prepare and carry out with scrupulous exactness the work prescribed by the teacher, is no doubt being educated ; he is an educand and nothing more. But at a later stage he probably realises the need of making himself better than he is, either in skill or in knowledge, to say nothing of morals. As soon as he seeks to make himself different from what he is at present, he takes himself in hand, and to that extent ceases to be an educand and becomes his own educator. A good system of education is marked by just this transition step by step from educand pole to educator pole. At the earlier stages the external educator does practically all the work as educator that is to be done ; but as the process advances the educand takes a hand, and by and by comes to such a mastery of himself that he is practically his own educator. No doubt even at this highest stage the external educator does exercise a certain guiding influence of which the educand may not be fully aware, but the prominent relation between educator and educand is now rather that between teacher and pupil. At this stage it is not so much that the educand is educated by the teacher as that he edu-

cates himself by reaction upon his teacher. The professional teacher becomes a means by which the educand completes his own education. The whole process of education may be said to be one in which the educand becomes gradually transformed into his own educator. Ambitious people in other walks of life seek to strengthen their position by making themselves indispensable. The true professional educator must seek for success by quite a different route. Like the good doctor, the good educator proves the efficiency of his work by making himself unnecessary. The true educator is never satisfied with his work on any given educand till his occupation, so far as that educand is concerned, is gone.[1]

In the process just described there is a danger of confusion between the spheres of the external and the internal educator. We have, in fact, to deal with two spheres of education in which work is going on simultaneously. These may be named the subjective and the objective. When we have two persons concerned, the educator and the educand, we have two consciousnesses interacting, and the whole process may be regarded by an onlooker as objective, just as any process in chemistry may be regarded. The educand merely responds as he is expected to respond, it may be without any consideration or understanding of the educator's purpose, or it may be with a partial awareness of that purpose. In both cases the education is an external process, and may be fairly called objective. In so far, however, as the educand enters into the purposes and plans of the educator, and takes a hand in favouring (or even in opposing) them, we have an internal active process going on within the educand's experience parallel with the

[1] Speaking of the function of the educator Dr. Ch. Ribéry writes: "Poussant jusqu'au bout l'abnégation, il doit mettre l'enfant en état de se passer de lui. L'œuvre de l'éducation est, au fond, d'aider l'enfant à prendre la conscience, la direction de lui-même; et le maître a rempli sa tâche s'il parvient à se rendre inutile, si l'enfant devenu homme, n'a plus besoin d'appui. Une éducation bien conduite doit rendre l'enfant capable de poursuivre lui-même et d'achever l'œuvre du maître." *Classification Naturelle des Caractères*, p. 194.

external, a subjective process parallel with an objective. Education, viewed from the standpoint of the educand's own conscious and active experience of the process, may be said to be subjective. When we say that "the educand element practically disappears," the reference is of course to the objective sphere. The process of education does not stop when the educand takes the matter in hand on his own responsibility, and treats the external educator as a mere means. The education goes on as vigorously as before, though its sphere has been transferred from the outer to the inner, from the objective to the subjective.

In some cases it may well be that the subjective form of education does not appear at all. The educand may remain throughout long periods pure educand, and nothing more: in fact, he may never take himself in hand. In such cases, so far as the experience of the educand is concerned, education is uni-polar, though of course, from the point of view of an observer, the external education—as implying an educator and an educand—is bi-polar. In the experience of most educands education is bi-polar throughout, in both the subjective and the objective spheres. It is true that at the highest point in the educational experience of the intelligent educand there comes a time when the process appears to be uni-polar, for the educand is now fully aware of his own desires in the matter of education, and does all his own educating, using the external educator merely as a means. Yet even at this stage, and while the educand thinks that he is in complete command of the whole educational process, he may be under education in ways that he does not suspect. A school captain, a school prefect, a university student is often in this position. He thinks he is merely using his tutors as means with which to educate himself, while these tutors are deliberately moulding his character. Not infrequently the educand resents the idea of being moulded by another, and the skilful external educator may be able so to act as to modify the very resistance of the educand into a means of educating him. Thus the educational process may be going on vigorously on both

317

the subjective and the objective plane at the same time. Indeed, as we shall see later, there may be a whole series of spheres of education in which the process is going on simultaneously.

Yet in each of these spheres the process is bi-polar: there must always be the educand pole and the educator pole. In every case the educator pole is the positive one, the one marked by deliberate intention. The educand may or may not take an active share in the process. The moment he begins to take a hand he changes the relative energies of the two poles, but he does not by any means remove polarity.

In subjective education we have the phenomenon of the merging of the educator in the educand. The self takes the self in hand, so that educator and educand are one. There is a natural temptation to split up the self, and to say that one part of it educates the other. But the organic unity of the self must be maintained at all costs, and the very reasons that philosophy supplies for maintaining this unity give a justification for the recognition of polarity in education. The soul, like the magnet, is one and indivisible. The magnet as magnet cannot be divided, though a given magnet may be broken up into an innumerable host of smaller magnets. The number of magnets, like the number of souls, may be indefinitely increased, but each magnet has its two poles with their constant relation to each other. Polarity in education is in fact nothing more than a special application of the subject-object relation in the ego. There is indeed an interesting parallelism between that "reflection" to which Locke invites us in the process of discussing the problem of knowledge, and the activity that we have called subjective education, that is education of and by the self. In both cases there is a turning back of the ego upon itself, in the one case to examine, in the other to modify. The cases differ in that reflection contents itself with examination and contemplation, while education is essentially active.[1] The soul not only takes stock of its

[1] It is true that merely to take stock of the self is to modify it to a certain extent, but the modification is not deliberately made.

powers and processes, but sets about to modify them. In subjective education we take ourselves in hand, and seek to make of ourselves something that at present we are not.

It will have been noted that the term *self-education* has not been used. The reason is that it has gathered a certain connotation that renders it an inaccurate description of what goes on in the subjective sphere of education. In the ordinary sense, a self-educated man is one who has had no external teacher. His education therefore must be subjective no doubt. But so also may be the education of a man who is finishing his fourteenth year of education at school and college under masters all the time. In one sense all education is self-education. No man can learn for another, just as no man can take exercise for another. But there is clearly a marked difference between that form of education that is directed from without and that which is directed from within. It is of course possible to combine the two forms: indeed the highest grades of education almost always do combine them. But there is an infinite variety in the relative proportions of self-direction and direction from without.

If we are going to compare the advantages of external education with what is popularly understood as self-education, we ought to take the best possible kinds of each. Under these limitations the most cogent argument against the external educator is that his influence diminishes the power of initiative of the educand. Since the master is always at hand preparing material and presenting it in the best possible way, the not unnatural inference is that there is nothing left for the educand but a more or less passive acceptance of the material provided. But if matter is presented "in the best possible way" this unwholesome stuffing is precisely what cannot happen. It is the very contingency against which the external educator has to provide. Certainly he must plead guilty to saving the pupil some labour, inasmuch as the proper material is all prepared beforehand. But this is a sound and desirable

gain. It surely will not be argued that the self-educated inventor does better work because he has had to do over again a great part of the work in his department that has been already well done, though its results have not come under his notice. Not to enter into the capitalised results of all previous workers is surely a disadvantage to the worker in any field. This preliminary work must be mastered before the worker attacks new problems, but if his energies have been spent in doing over again work already well done, he approaches his real work with unnecessarily weakened powers.

Just here, however, it may be objected that the very fact that he has mastered on his own account the preliminary stages will put him in a better position for understanding the real bearing of the whole subject than he could ever hope to attain from the mere assimilating of the works of other men. In this discussion it is not a valid reply that under such conditions progress in knowledge would be at all times slow, and at a certain stage would reach a point at which it would become impossible, since no man could hope in his short life to rework all that his predecessors had done, and thereafter have time to make fresh discoveries. At the present moment we are interested not in the progress of knowledge, but in the kind of man produced by a given form of education. The argument is that by depending entirely upon his own efforts, and neglecting the help of the external educator, the educand will become a better man than he would have done if he had availed himself of all that the educator had to offer. Jacotot, schoolmaster recreant to his craft, revels in denunciations of masters as useless. "What is a master?" he asks, and contemptuously answers: "Is he not a man who asks someone: 'Don't you see what I am showing you.'"[1] The educand must ultimately do the whole of the work, and he will do it all the better if he can manage without the interference of any master. If it be admitted that, so far as the mere possession of facts is concerned, the educand is as well off

[1] *L'enseignement universel*, seventh ed. p. 55.

in the one case as in the other, the question remains: while he knows the same facts in the two cases, does he know them in the same way? The implication is that the man who has discovered certain facts for himself knows those facts in a much more real way than does the man who has merely acquired them at second-hand. Self-won facts are claimed to be more vital than facts for which we have not had to work so hard. The relation between knowledge and power will be discussed later. At present it is enough to point out that the distinction here drawn is based upon a misrepresentation of the facts under discussion. It does not follow that because certain facts are presented to the pupil by the teacher "in the best way possible" that they blunt his energy. Rather they stimulate him to fresh activity. In fact the test whether facts have been presented in the best way is just this: are they so presented as to lead to the precise activity that the teacher's superior knowledge tells him should follow at this particular stage? Frequently the best way of presenting a fact is not to present it at all, but to place the pupil in such a position that the need for it will press upon him and drive him to discover it for himself —for which discovery the teacher has taken care to prepare the way.

This awareness of the educator of all that is going on, is an essential element in the connotation of education, whether subjective or objective. There is no education unless the educator is aware that it is going on. No doubt we are all educating one another all the time, but this can be called education only if we introduce the idea of an educator outside of us altogether, who *is* aware of the education. The word awareness has been used here instead of consciousness, because of a certain ambiguity of that word as used in education. It is sometimes said that psychology is the science of consciousness, and education might be regarded as the art of manipulating consciousness in such a way as to modify the development of the creature possessing the consciousness. The educator-consciousness manipulates the consciousness of the educand, even when

the educand is unaware of the process. It is here that the ambiguity comes in. Education is always a conscious process, in the sense that the educand is always conscious of what is going on. That is to say, he is always conscious of something going on, though he may not be conscious of what the whole process means.

We can use the phrase "unconscious education" where the whole meaning is that the educand is unaware that he is being educated, though of course he is fully aware of all that is going on at the time. We often hear of a person having been unconsciously educated for a particular position that he was afterwards called upon to fill, and in the same way it is quite conceivable that a man may deliberately educate a son, a nephew, or indeed a stranger to occupy a particular position without the educand being at all aware that he is being educated in this way.[1] The incidence of consciousness in the educative process is of the first importance. Take the case above suggested of a man educating another for a special post. There are circumstances and there are temperaments that would make it very injudicious to make the experiment of informing the educand of the ultimate purpose for which he is being educated. In other cases the educator's purpose would be greatly forwarded by the educand sharing in the educational aim. It is customary for historians and biographers to speak in this way of unconscious education. In all such cases we must understand that the education was both conscious and deliberate on the part of someone who is the educator, and that the educand was conscious of the process, though unaware of its educational aspect. In every case of education there is consciousness at both the poles, though aware-

[1] The enthusiastic expression "to have loved her was a liberal education" owes its point to the very unusual sense in which the term *education* is applied in the epigram. To work out the scheme

Mistress : Lover :: educator : educand

reduces the whole to an absurdity. There have been cases, to be sure, in which unwholesomely self-conscious persons have used the love-relation deliberately as a means of self-realisation. Here we have a real, though undesirable, form of education.

ness of the educational purpose may be limited to the educator pole.

The educand is able to take a share in his own education only when the self-conscious stage has been reached. Consciousness is of the very essence of education, and self-consciousness is essential to awareness of the educational process. We must be aware of the self before we can deliberately act upon it.

Consciousness (we are not here speaking of self-consciousness) has as its psychological concomitant inhibition. All processes of which we are conscious are marked by inhibition in a greater or less degree. Where consciousness is present there is always a longer or shorter delay between stimulus and response.[1] The practical value of consciousness lies largely in this, that it makes us aware of certain facts that affect the organism in a way somewhat out of the common, or at any rate that demand practical attention. Nature has so arranged matters that our consciousness shall be aroused in connection with things that affect our lives. Matters of routine can be attended to by actions that are little more than reflexes, but wherever there is need for a new decision there consciousness is roused, and as a consequence there is a longer or shorter delay in responding to stimulus—in other words, there is inhibition.

It is for this reason that we have not the full control of the direction of our consciousness. Speaking generally, we can direct it in this way or in that at will. But at any moment some external occasion may arise that demands the instant concentration of consciousness on a certain object quite irrespective of our inclination.

It may quite reasonably be maintained that education can operate only through consciousness. The bringing of a certain activity into consciousness, the keeping of it before the consciousness till familiarity or skill is acquired, and then the lulling of consciousness again—these represent the usual steps in a completed stage in educative process. We

[1] We must not assume, however, that delay caused by physiological obstruction necessarily implies what the psychologists call inhibition.

are not to be confused between consciousness and memory of being conscious. Most of us in our easy-going way would be inclined to say that we learnt to walk unconsciously. But we have only to observe the actual process of learning to walk to realise how intensely conscious the process is. Then, of course, we are not to confound self-consciousness with mere consciousness. Lastly, we are not to be misled by the claims of the subconscious. We are beginning to hear of this subconsciousness as if it were a mysterious place from which come forth all manner of strange things new and old. Whatever cannot be explained in any other way may at least be referred to the subconsciousness, where no one dare follow it. That we are abundantly ignorant of what goes on in the subconsciousness will be cordially admitted by all, but one fact seems to stand clear amid the general gloom. We cannot take out of the subconsciousness things that we did not put there. Processes may go on in the subconsciousness, and results may be produced that have eluded us during our conscious moments. Elements may be manipulated there, new combinations may be formed, but no new *element* ever emerges.

The subconsciousness may be described as the sum total of all that has ever been in our consciousness, and may be in our consciousness again. For every individual all the facts in the universe fall into two distinct classes, those that have passed through his consciousness, and those that have not. Some of the smaller class may be so completely forgotten that they are to all practical intents as dead to the individual as are those of the wider class. But there is always the possibility that these forgotten facts *may* come back to the consciousness, and a second appearance in the consciousness is never quite the same thing as a first. A fact that has once been in a consciousness is never quite the same to that consciousness. It has acquired a relation to that consciousness through which it may be called back again, or may even exercise a certain influence within that consciousness without ever being actually recalled over the threshold again. The only meaning that can be attached

to the statement that a given idea is at the present moment in the subconsciousness of a given person is that it has formerly been in his consciousness, and that it is now on its way into that consciousness again, or is just disappearing after having been in that consciousness. The important point is that it can exercise an influence from the subconsciousness only on one or other of these two conditions. The importance to the educator of these facts will not be questioned, but there is nothing mysterious or mystical about them.

An illustration of the ordinary form of the educational process in relation to consciousness may be found in the somewhat extravagant recommendations of a recent book,[1] the main subject of which is an appeal for the re-education of the kinaesthetic system. The author maintains that the subconscious self is the remnant of the animal powers of instinctive reaction man had before he reached the stage of interfering with the evolutionary process. This we may pass over. What interests us is that when he seeks to get at educational work he at once emphasises the conscious. What he wants is to establish a proper "mental attitude towards" all the physical processes—for example breathing. This is to be brought about by a general attempt to establish voluntary control over our organs. Progress lies in becoming conscious of certain physical processes—say the movements of the muscles of the larynx—and by becoming aware of these processes acquiring through practice the power of modifying them. When the requisite modifications have been brought about, the next process is to let the movements fall back into the subconsciousness, and be careful never to disturb them there. It has to be noted that this is precisely what takes place at present in the case of those who through lack of early training have acquired bad habits of breathing or of voice production, and who at a later stage set about re-educating themselves. They are supplied with little mirrors, by means of which they may observe the movements of the muscles of the larynx, and

[1] *Man's Supreme Inheritance*, by F. Matthias Alexander.

thus become conscious of what is going on when certain sounds are produced. When the necessary skill has been acquired in manipulating the muscles, the time has come for relegating to the subconsciousness the whole mechanism of the process.

In feeling after the connotation of education, we naturally look around for categories under which the subject may be considered. All the qualifying descriptive phrases applied to education give an indication of such categories, especially those terms that occur in correlative pairs. Of these we have already dealt with a pair of the most fundamental, *subjective* and *objective*, which carry us back to the category of polarity.

Another important category is found in the incidence of human influence deliberately exercised. It is obvious that the enormously wide range of J. S. Mill's first definition marks a different kind of education from that we generally mean when we use the word. Huxley is specially alive to this distinction, and proposes a name for the ordinary kind of education when considered under this category:

"The object of what we commonly call education—that education in which man intervenes and which I shall distinguish as artificial education—is to make good these defects in Nature's methods."[1]

The opposite of artificial is plainly *natural*,[2] and the term is indeed suggested in the passage quoted. But neither term is quite satisfactory. *Artificial* has the suggestion of *un*naturalness about it, while by Huxley's own showing he does not mean any opposition between his two kinds, the one is really complementary to the other. Further, the term *natural* education is likely to lead to a confusion between education *according to* nature and education *by* nature. Huxley's distinction is practically brought out in the usual terms *formal* and *informal* education. The

[1] *Collected Essays*, vol. iii. p. 85.

[2] Schopenhauer opposes to *natürliche Erziehung, künstliche Erziehung.* Essay on *Erziehung: Werke*, vol. vi.

meaning and force of the category will, however, be probably best conserved by adopting the terms *human* and *cosmic*, the former denoting all kinds of education in which man has deliberately taken himself in hand. In cosmic education man's place as educator is taken by some force that is more or less external to him—the world-spirit or God. We have to thank Huxley for his personification of Nature as an educator, for it enables us to maintain the bi-polar character of cosmic education. When we speak hereafter of cosmic education we shall understand that in the process Nature is at the educator pole.

The incidence of the personal influence of the individual educator supplies another category of some importance. Under this category we have education represented as either *direct* or *indirect*. The educator either exercises his influence on the educand by his direct contact with him, or by the use of various diluends by means of which that influence may be brought to bear upon him. To the same category may be referred the distinction between the two kinds of education sometimes known as *positive* and *negative*. *If* the educator is able to impart power directly, or to produce specific effects by definite actions, he is said to be doing positive educational work. But if he can gain his end only by clearing the way for other forces, he is said to educate negatively. Positive education does not correspond exactly to direct, nor negative to indirect, but they correspond sufficiently closely to render it unnecessary to supply a separate category for each pair. If such a category is demanded for the positive and negative pair, it may perhaps be found in the nature of the power at the disposal of the educator.

A very important educational category is the organon, or instrument (usually recognised to be *knowledge*) used in the process. According to the view adopted on this vital matter, education is classed as *material* or *formal*, where the word formal is used as equivalent to disciplinary, and therefore is to be distinguished from formal when opposed to informal. The nature of the educand and the effect

upon that nature of the use of the organon marks the formal aspect of education ; while the nature of the organon itself is emphasised in the material aspect. In practice, formal education means the antithesis to informal education, the phrase formal *training* or formal *discipline* being used to indicate the formal aspect under the category of the organon.

When we consider education from the point of view of the use to be made of it in the future life of the educand, we find that it falls into two classes : the *specific* and the *general.* This involves the category of future reference. If it be intended to fit the educand for any one particular walk in life, education is justly called specific ; whereas a general education is one that fits him to take up any walk in life to which he may afterwards happen to be called.

The number of educands affected at a time supplies another category, in respect of which education is either *individual* or *collective.* For the professional educator in almost all cases education is collective, yet strangely enough the study of education has concerned itself mainly with the individual student. Of late, however, there has been a marked tendency to deal with the subject from the collective point of view.

The idea of the whole and parts supplies another and a very important category, which may be regarded as that of unity. *Integral* education is the name given to that form in which the educator uses the perfect round of knowledge, though, in order to make his scheme workable, he may have to omit a great mass of details: his organon is the complete whole, though he may be able to use that whole with an incomplete though representative content. In this case there is no substantive antithesis as under the other categories. Education is either integral or non-integral. *Fractional education* is a somewhat meaningless phrase, and at any rate is not likely to be adopted as a working conception by any group of educators. Perhaps *sectional* might be an acceptable equivalent for non-integral. The educator by sections is the man who selects such branches from the

whole round of knowledge as he thinks best suited for the educand, and depends on his own power of rounding off the resulting knowledge without any too prominent lacunae. Integral education sometimes takes the unity of the mind instead of the unity of the round of knowledge as its characteristic. True integral education must include both unities in one rounded whole.

Most of the other categories will be dealt with in some detail elsewhere in the text and their inter-relations examined, but it will probably be well to say here what is to be said about the educator's personal influence. Is he to exercise it directly as a personality, or is it to be applied through the use of books, exercises and general environmental manipulation? We have seen that though cosmic education and human education may be clearly distinguished in thought, they may be carried on simultaneously. They do not stand in opposition to each other. Cosmic education may include human education. So with direct and indirect education. They may go on concurrently, in fact, must go on concurrently. Except in pure hypnotism the educator cannot bring his personality to bear directly upon the educand as it were *in vacuo*. There must always be a background. On the other hand, he may intend his educational process to be purely indirect, but in spite of himself he will find that his personal influence has had its direct effect on the educand. This may or may not be an advantage, according to the nature of the educator. There is a prevalent error regarding the relation between the educator and the educand, that is perhaps not very surprising from the circumstances of the case. A former Bishop of London, speaking on this subject, said that whatever else it might mean, education always implied in the last resort the intercommunication between an inferior and a superior mind. Nothing could be further from the truth if the implication is that the educator is necessarily superior in endowment to the educand. The difference between the educator-mind and the educand-mind is not one of quality but of maturity and of content. From the point of view of general experi-

ence and knowledge of the world, the educator is necessarily the superior of the educand. Were it not so, it would be impossible for education to proceed. Too frequently the educator has not an adequate knowledge of men and things. But he has a sufficient start of the educand to go on educating; and he does go on. By and by when the educand comes into relation with finer and better stocked minds and sees facts in a new light, he naturally has to remodel his conception of things; in other words, he has to reconstruct his world of ideas to bring it into better accord with the nature of things.

Such reconstruction is probably unavoidable. No doubt the ideal is that the educator should present matters in such an order that the work of the educand is always positive, and never negative, always constructive, and never destructive:

> "It is probable that something like double the progress could be made by pupils and students of all grades if an exact logical method could be adopted in the order of studies, so that every new study would naturally grow out of the one that had preceded it."[1]

But this perfectly logical presentation is impossible for the ordinary intelligent educator, to say nothing of the unintelligent, and the comfort is that there are certain valuable *educational* results that follow from the imperfection of the *teaching* process, so long as the amount of destruction and reconstruction within the mind of the educand is kept within the limits that diligent and intelligent preparation on the part of the educator can certainly maintain. When the amount of trying back, and unlearning what has been learned, is reduced to a minimum, the skilful educator may well utilise even the reconstruction process as a means of consolidating the real knowledge that has been already acquired and getting the best educational results from it.

Another error is that the educator sometimes thinks that his object is to produce in the educand a more or less accurate copy of himself. Even if this were desirable, it

[1] Lester F. Ward: *Pure Sociology*, p. 45.

is doubtful whether the direct method is the best to produce the required result. We are apt to think that if we get a particularly fine character as educator—"a man who could have been Prime Minister"—the educands will naturally resemble him, so far as their capacities will allow. No doubt the force of imitation is extremely powerful, and indeed in certain cases irresistible. But its force is not always exerted in just the direction the educator might desire. It is apt to exhaust itself on what is prominent rather than on what is fundamental. Further, imitation is not the only force called into play. There is direct action and interaction between the educator and the educand, and the result sometimes is that the educand does not reproduce the qualities of the educator but their opposites, or rather their counterparts. The very excellence of the educator's character may act adversely on the educand. Consider what John Stuart Mill says about the influence of strong-willed parents on their children. Speaking from his own experience, he maintains that the exercise of the parental will is apt to leave insufficient opportunity for the development of the will of the child,[1] and that strong-willed parents have weak-willed children. In the intercourse of life it is often found that the unselfishness of one person trains up another in selfishness. It is sometimes said, for example, that the unselfishness of sisters has a great deal to do with the alleged selfishness of brothers. Cromwell trained his Ironsides to resemble him in many ways, but in some directions his training produced an attitude of mind that was different from, because complementary to, his own. The power of command on one side, for example, was balanced by the facility of obedience on the other. The educator must not seek to impress his character on the educand from without. Rather must he strive to discover the ideal character possible to each educand, and so apply his forces as to foster the development of this character. The educational principle underlying the contemptuous saying: "Don't do as I do, do as I tell you" implies at

[1] *Autobiography* (1873), p. 37.

least the saving grace of modesty. Were it only of practical application, it would be one of the most valuable principles known to education. Unfortunately, the power of imitation is so great that the educator cannot divest himself of the responsibility involved in the mere process of living in contact with his educands. He is a model whether he will or no. He cannot shirk the responsibilities of the position in which he is placed, and in honour must walk circumspectly, however much he may resent the difficult and indeed invidious part that is thrust upon him. He must further modify his conduct so as to suppress certain of his tendencies harmless in themselves, and even meritorious, but unwholesome in the educational process because they restrict the corresponding activities of the educands. There is no harm in being a fluent talker, but the educator must frequently suppress this gift, in order that the educands may have a sufficient opportunity to exercise theirs. The abstract moralist makes a pretty point when he maintains that the educator should neither make, nor prevent, but "*let* his light so shine before men" that they may learn of him. But the light needs trimming. In many directions it is the educator's duty to efface himself. The educator of vigorous personality and strong motor temperament is very apt to think that he is doing excellent work when he is letting off his energies in strenuous teaching, while as a matter of fact he is repressing the activities of the young people who ought to be doing their share, and are not permitted. Even intellectual work may be so conducted as to weaken where it should strengthen. Consider what underlies the following public Eulogy of a distinguished teacher:

"His students had such implicit confidence in his knowledge and such reverence for his opinion, that after leaving him they no longer cared to think for themselves. They were satisfied by the conclusions reached by a mind so much superior to their own, possessing a grasp and insight which they realised was so far in advance of anything they could ever hope to attain."[1]

[1] S. B. Sinclair: *The Possibility of a Science of Education*, p. 18.

Meant as a panegyric, this is really an indictment of the teacher in question. It is a proclamation of disastrous professional failure. Even from the point of view of mere instruction, what the teacher is or does is of relatively small importance as compared with what the pupils do. In teaching, the thing that matters is what the pupil does or thinks. We are too apt to forget that teaching and learning are correlative terms. However attractive the teacher may be, he cannot learn for his pupils, and if they do not learn his teaching has been in vain. It is not enough that the teacher teaches and the pupils learn. Unless the pupils learn *because of the teaching*, there has been no real teaching done.

We cannot have too good a man as educator, but we can have a man whose goodness is thrown away because of his incapacity to bring his good qualities to bear upon the educands in the only way that will produce the effect he desires. The quality most necessary to secure success as an educator is the power of putting oneself in the place of the educand, and of looking at things from his point of view. There is a growing tendency to recognise the fact that the teaching part of education is essentially a dramatic process, and Professor Royce supplies the psychological explanation of the "prominence that the dramatic element has in all instruction." The result of all these considerations is that the educator is called upon to play a part, to be to some extent an actor. Direct education implies the immediate application of the educator's personality to the personality of the educand. But the same personality may produce a totally different effect in reaction upon several different educands. The educator must therefore be at liberty to present now this aspect of his personality and now that, in order to produce the effects he desires. There is a natural repugnance to any approach to insincerity on the part of an educator. Polonius with his stage-soiled "To thine own self be true" fittingly represents the attitude of the plain man to any deviation of the educator from the narrow path. But the Polonian philosophy breaks down

on the first application to education. If the educator is to be true to himself in the sense of not doing what is fitting in the circumstances, he must inevitably be untrue to the self of the educand.[1]

It is now very generally asserted in social psychology that the self differs according to the alter against which it reacts. This is perhaps rather a strong way of putting the matter. The actions it performs are always, of course, a joint product in which the object has its part. We cannot think of a star in the same way as of a steak. The self is only one factor in any case. With this caveat we may accept the view that the self appears in a new light with each alter that it encounters. J. M. Baldwin indeed goes the length of maintaining that we cannot know the real self unless we know the alter against which it is reacting. The real self is the social self, the *socius*.[2] If there be any truth in this, then the educator must change his part with each educand that he deals with. But this involves no loss of moral integrity. In the common room the schoolmaster may without sin laugh with his colleagues over the misdemeanours of Smith minor, even though in his dealings with the minor Smith there was anything but a humorous turn.

The interplay of the two selves brings up the whole question of the ultimate aim of education. Gathering up what we have learned from all that has gone before in the

[1] On this point it is interesting to find that even such an uncompromising moralist as Kant is willing to make allowances. Though he tells us categorically that "there is no single instance in which a lie can be justified" he deals as follows with the teacher's playing of a part. "It is difficult to read the characters of others, but we must learn to do this without losing our own reserve. For this end a kind of dissembling is necessary; that is to say we have to hide our faults and keep up that outward appearance. This is not necessarily deceit, and is sometimes allowable, *although* it does border on insincerity." It is very obvious that he is most uncomfortable about the whole matter. He relieves himself by adding "Dissimulation, however, is but a desperate expedient." (*Thoughts on Education*, p. 96 of A. Churton's translation.)

[2] *Social and Ethical Interpretations in Mental Development*, p. 24.

matter of the connotation of education, we find that it includes the following elements:

1. It is a bi-polar process in which one personality acts upon another in order to modify the development of that other.
2. The process is not only a conscious but a deliberate one. The educator has the clearly realised intention of modifying the development of the educand.
3. The means by which the development of the educand is to be modified are twofold (*a*) the direct application of the educator's personality to the personality of the educand, and (*b*) the use of knowledge in its various forms. We shall find as we go on that the communication of knowledge tends to play the predominant part.

It remains to discover what the aim of the whole process is. It will be felt that it is too vague to say that it is merely to modify the development of the educand. We want to know in what direction the modification is to take place. We know in a general way the process; but we do not yet know its goal. To the question: What is the aim of education? there is a discouraging abundance of answers: Preparation for complete living; the harmonious development of all the faculties; adaptation to environment; a sound mind in a sound body; the perfection of our nature; the preparation of a perfect citizen; to develop children as imperfect beings into perfect beings; inward development; a gradual adjustment to the spiritual possessions of the race; to repair the ruins of our first parents by regaining to know God aright; a completely moral man; to develop self-activity; the transmission of life from the living through the living to the living; socialisation—an interminable list. It seems hopeless to select any one end as the most likely to focus all the elements involved. But there are two not yet mentioned that stand out from the others as embodying all the essentials, and as between them covering the whole field. The one is based upon the nature of the educand himself, the other has a definite

relation to the reaction between the educand and knowledge. The first is *self-realisation*, the second *many-sided interest*. These have been frequently treated as antagonistic ideals, and each has its enthusiastic supporters. But it will be found as we proceed that so far from opposing each other they are really complementary. Neither can be attained apart from the other, and their union is essential if we are to have an ideal that shall really include all the aspirations of the various schools. To reconcile the apparent opposition between these two ideals is the goal of the stage that has been now reached in the evolution of educational theory, and can be satisfactorily attempted only after we have made a full examination of the various theories.

CHAPTER II

THE DATA OF EDUCATION

In the problem of Education the educand himself is naturally the first datum. He is assumed to be educable. Indeed by the very name that we have found it convenient to give him we have begged the question of his educability. Common experience justifies us in taking it for granted that human beings are capable of education. All that we can learn of the history of man from records or from traces of his early civilisation, goes to strengthen the assumption.[1] Indeed it is man's special capacity for education that has ensured his present position at the head of the animal hierarchy. Many questions naturally arise in connection with the conditions under which the education may be carried on. Who is to be the educator? What are the means at his disposal? What is to be the criterion of his success? Such questions will be dealt with in their proper place. At this stage it is enough for the time being to accept the educand as one of the data of education.

He is not, however, placed in the educator's hand unreservedly. He carries with him certain limitations that must be regarded as fundamental data in the educator's problem. It is necessary that these data should be recog-

[1] The biological view of educability is well put by Sir E. Ray Lankester in his *Kingdom of Man*:

"It appears that the increased bulk of cerebral substance means increased 'educability'—an increased power of storing up individual experience—which tends to take the place of the inherited mechanism with which it is often in antagonism" (p. 23).

nised, understood and accepted before any progress can be made in formulating educational theory. There is great diversity of opinion regarding the nature of the educand as raw material on which the educator may work. By one set of theorists he is represented as a little angel who comes trailing clouds of glory from heaven which is his home. Others present him as a being who is totally corrupt, full of original sin, and with a heart that is "deceitful above all things and desperately wicked." Others again—would that the educator could unhesitatingly accept their comforting tale—tell us that the educand brings a treasury of possibilities. His soul is fallow ground on which the educator can grow any crop that may be desired. Experience does not bear out fully the views of any of the theorists. The educand is neither angel nor devil; nor is he mere clay in the hands of the potter. He counts for something individual in the educational process, and the educator has to look around for some more reliable guide than the theological or psychological prejudices of his predecessors.

As to the quality of the original endowment with which the educand is born into the world, there is room for dispute, but as to the fact of the endowment there is general agreement. We all come into the world with certain possibilities and limitations. These must be regarded as part of the ultimate data of the educator. The physical endowment, which is more open to inspection than the mental, is very commonly regarded as immutable so far as its amount is concerned. Not only are we powerless by taking thought to add one cubit to our stature, but we are unable to increase the native or "brute" strength of any of our natural gifts. It is true that we may, on the one hand, do something by way of improved physical conditions and appropriate nourishment to make the most of the possibilities of the educand's organism, and, on the other, by skilful training get the best results out of his original spiritual gifts. It is here that the power of the educator appears. We cannot add cubits to the educand,

but we can help him to make the best use of the cubits he has.

Midway between the purely material basis and the superstructure that is usually called character there comes that important element known as temperament. Whether we adopt the old-fashioned "humours" classification or fall back upon the modern view that is based on nerve action, we very clearly recognise the close connection between temperament and the body. No doubt in the ultimate resort even character itself cannot be entirely dissociated from the body in which the soul has its being, but the connection is here more remote, and writers have been found who deny it altogether. In respect of temperament, however, there is a general acknowledgment of close connection with the body. The word is frequently used, in fact, when we wish to deny or to minimise responsibility. We feel that for our character we must play the advocate. We must account for the results of its activity. On the other hand, the temperament is often held responsible for certain acts that we feel we cannot justify. When we have explained that it is a matter of temperament we feel as if we had said something that should at least extenuate what we have done. The popular view, then, seems to be that the temperament is something not altogether within our control, and therefore something to be accepted as a datum rather than to be worked up in connection with educational process.

Yet it has been long recognised that by attention to the physical side certain changes may be effected in the temperament. The well-known effects of certain drugs are a proof that we can directly influence conduct by material means. If courage be a part of character and not a mere matter of temperament, then we can at least temporarily affect character by producing "Dutch courage." With regard to the educational manipulation of temperament it is worth while quoting Descartes:

"The mind (*l'esprit*) depends so much on the temperament and the condition (*disposition*) of the organs of the body, that if it is

possible to find some means which make men in general wiser and abler than they have hitherto been, I believe that it is in medicine that it must be sought."[1]

There is no doubt that alcohol and opium produce an immediate effect on temperament, even an effect that may be an improvement. Further, if the application of these drugs be continued long enough a permanent effect on temperament is produced, this time unfavourable. It is conceivable that apart from the question of economy of nerves and morals it might be advisable to keep certain temperaments under the permanent influence of certain drugs. A bromide scientifically administered might do wonders in improving some persons, while a regulated stimulant might be the making of others. All this is too unwholesome as a basis for practical suggestion, but when it comes to the influence of ordinary foodstuffs we are on safer ground. Here it is admitted that a complete change in diet once established and then continued for a long period does result in certain changes. A meat and a vegetarian diet have well known temperamental reactions, and experiments carried out in prisons support the view that within certain narrow limits changes in temperament can be in this way effected. Since education has to include the physical as well as the spiritual, it is to this extent bound to take into account considerations of dietary in relation to temperament in general; but it need not expect to be able to do much character building by the help of a regimented dietary. The temperament may be affected generally, but it is difficult to believe that much can be done in the way of producing *specific* changes by means of safe foodstuffs.

But apart from all special means of acting upon it, the temperament is sometimes noticed to change. Indeed, Lotze regards this change as the rule rather than the exception. He maintains that the same person possesses at different times in his experience all four of the classical temperaments. He begins in childhood as a sanguine,

[1] *Discours de la Méthode*, VI^e^ Partie.

becomes in youth a melancholic, passes his years of vigorous manhood as a choleric, and ends his days as a phlegmatic.[1] Too much importance need not be attached to this opinion, but it at least shows that the view of temperament as immutable is by no means universally accepted.

Still, since the connection between the body and the temperament is so close, it is clear that we are right in including temperament among the data of the problem of education. But when we come to character, the case is different. Ought this not to be regarded rather as the goal of education than as one of its data? In order to discover why the question should even be asked, it is necessary to make clear the distinction between character and temperament. It has been said that temperament is the physical basis of character. But temperament, after all, is not physical, though its relation to the body is so manifest. In a sense temperament too is character. It is an aspect of character:

"There exists in all men an inner character in which two parts can be distinguished. There is in the first place a fund of tendencies that express the general manner of being of the organism, its mode of functioning, the tone, the value, and the direction of its vitality; this is what we have called the temperament. In the second place there is in the inner character traits which express the relative value of certain particular organs: these are the special needs and the special aptitudes. Our inner character is our organism viewed from within; our organism is our inner character viewed from without."[2]

The French word *naturel* lends itself very conveniently to distinguish that part of character that is really so closely connected with bodily qualities that it is dominated by them. A man's *naturel* is really his character so far as that may be described as temperamental. Fouillée, in the Preface from which the above is taken, emphasises the distinction by saying:

[1] *Microcosmus*, vol. ii. bk. vi. chap. 2.

[2] Alfred Fouillée: *Tempérament et Caractère*, Préface.

"Our *naturel* expresses itself especially in our manner of being happy; our character expresses itself especially in our manner of behaving ourselves" (*de nous conduire*).

It is clear that the *naturel* is one of the data of education. It includes all the qualities that give individuality, and theorists on education are never tired of repeating that the individuality of the educand must be respected. But while the educator must not interfere with the individuality of the educand in the sense of seeking to remove it, he is entitled to use it; indeed it forms the very basis of his work of character-building. Character has in fact been defined in terms of temperament: character is "a crystallisation of habits round a central core (*noyau*),[1] which is the primitive temperament."[2]

In English usage there is a certain interchangeability among the three terms, individuality, personality,[3] and character. On the whole, individuality will be found to be used in a more objective sense than personality. The latter term has usually the connotation not only of distinctive characteristics but of awareness of them. Character is clearly marked off from both by the fact that it usually implies not merely the possession of certain qualities, but the evaluation of them. A man may have marked individuality, and a striking personality and yet have a bad character. It is true that sometimes we speak of a weak person full of oddities as "a character," and we occasionally speak of an evil person as a man of "strong character"; but in general the distinction suggested holds good. If the first distinction be accepted, individuality is a datum in education, personality almost wholly a datum, but still leaving a certain scope for the educator, while character is clearly the field of the educator.

[1] *Noyau* is rather a bad metaphor. Philosophers would prefer something like "undifferentiated continuum" or "undeveloped mass."

[2] Frédéric Queyrat: *Les Caractères, et l'Éducation Morale*, p. 34.

[3] Hegel regards *person* as the poorest expression for a rational individual, and as implying mere self-reference (or ego-hood) and legal rights. Everyone is a person, and everyone is much more. *Person* means less to Hegel than even *subject*.

It is true that there are certain discouraging writers who seek to remove character from the teacher's province, and thus render his work of small account. Plato's view that we had all the choice of our lot in another sphere, and that our life upon earth is merely the working out of that lot, does undoubtedly remove a certain amount of the educator's responsibility without rendering him entirely useless. After all, an educator is necessary to bring out all that is implied in our undeveloped character. Reminiscence leaves room for some outsider to jog our memories. When we come to Kant, however, we find a very disappointing state of affairs, if we are to believe his critics.

"According to Kant, we have chosen our character in the noumenal world, and this choice is thenceforth irrevocable. Once 'descended' into the world of time and space, our character, and consequently our will, remains what it is, without our being able to modify it in the smallest degree."[1]

Herbart takes the same view of the Kantian position:

"The teacher of transcendental freedom (der transcendentale Freiheitslehrer) who has eyes only for the manifestations of the already formed character separates the intelligible from the natural by an impassable gulf."[2]

It is true that the *Freiheitslehrer* referred to is not Kant but Fichte, yet this philosopher merely developed the Kantian distinction between the *empirical* character determined by physical endowment and experience of environment, and the *intelligible* character or the absolute character that is given outside of all human experience. For the educator the discouraging point is the apparent impossibility of influencing the intelligible character that holds itself secure in the impenetrable realm of the noumenal.

[1] Jules Payot: *L'Éducation de la Volonté*, p. 21.

[2] *Allgemeine Pädagogik*, bk. i, chap. ii, S. 6. Herbart again repudiates transcendental freedom in the *Einleitung* to his *Umriss pädagogischer Vorlesungen*, S. 3. For a general treatment of the educational bearings of idealism on education, see Herbart's *Über das Verhältnis des Idealismus zur Pädagogik*.

He can only stand by and watch the working out of forces that have their origin beyond his reach. It may be that the French psychologists and Herbart do not quite understand the position. For the very essence of Kant's transition from pure speculative to pure practical reason is that what lay beyond the first was *given* in the second. Of course there are inconsistencies in Kant's view; and he offers no explanation of the fact that a rational agent can be subject to the "heteronomy of desire," but his followers[1] believe that a better case can be made out for his educational position than that presented by Herbart and his school. The interaction between the two selves may be expressed by saying that "Man in his character as a rational being or a 'thing-in-itself' gives law to himself as a sensuous being or a phenomenon."[2] All that this amounts to is that the universal element in man must work itself out in the world of time and space. The mode of that working out can be manipulated by the educator on this theory, as well as on any other.

But whatever may be true about Kant, there is no doubt whatever about the cheerless tale that Schopenhauer has to tell, though, to do him justice he seems to realise how depressing his scheme is. He has the grace to see that his theory needs a good deal of justification. He leaves no doubt as to his position:

"The character of man is invariable: it remains the same the whole life through. Only in direction and material does it experience apparent modifications which are the consequences of the different ages in the individual life and their needs. The man himself never changes: as he has acted in one case, so under completely similar circumstances will he always act (supposing, of course, that he has a correct knowledge of these circumstances)."[3]

[1] Cf. Edward Caird's *The Critical Philosophy of Immanuel Kant*, vol. ii. bk. ii. chap. iii.

[2] Friedrich Ueberweg, *History of Philosophy*, vol. ii. p. 180.

[3] *Die beiden Grundprobleme der Ethik* (1841), p. 51. See also p. 181: "Der Mensch macht hierin keine Ausnahme von der übrigen Natur: auch er hat seine feststehende Beschaffenheit, seinen unveränderlichen Charakter, der jedoch ganz individuel und bei jedem ein anderer ist."

Elsewhere he asks to what purpose this farce of living is played, in which everything that is essential is irrevocably fixed and determined. He goes on to answer that it is in order that a man may come to understand himself, that he may find out what it is that he seeks, and through that discover what he himself is. He does make room for an educator, for we are told that this knowledge that man seeks must be imparted from without. But what reasonable educator is going to accept the post of teaching a man what the man wants but cannot get? Schopenhauer's statement of the aim of education is:

"that the knowledge of the world, the attainment of which we might mark out as the end of all education, may be begun from the right end."[1]

This eminently sensible aim appears to have little enough connection with his main thesis on character, and we want to discover what arguments he finds to support it. He writes brilliantly, but after all his arguments reduce themselves to two, neither of which is very cogent. In one place he argues that if the character be not an original and unchangeable endowment, but capable of improvement by intellectual and moral influences, and if religious persons and institutions do their duty, then

"at least on the average the elder half of mankind should be strikingly better than the younger."[2]

He maintains that we do not find this difference in real life, and we need not be greatly concerned to dispute the point with him. It does not prove his thesis. He has to show that character is immutable. Any single case that can be produced of a change in character either for better or for worse demolishes this whole argument. Is any one willing to maintain that in every single case of religious conversion that ever occurred in the world there has been no change of character? Schopenhauer, by the way, is not

[1] *Werke*, 1874 ed. vol. vi. p. 665.

[2] *Die beiden Grundprobleme der Ethik*, p. 255.

happy in his reference to the high average of youth among convicts.

The other argument is still more remarkable. Whoever has once proved himself a bad man by performing an evil action has for ever lost our confidence, which proves that we all believe the character to be immutable.[1] Is this the experience of life? Are we not continually hearing or reading of cases in which a person has been deceived for the second, third, fourth... nth time?

A very cogent argument against Schopenhauer is the lack in real life of the definite clear-cut characters that he appears to have in mind. His appeal to the consistency of the characters in the great dramatists is ill-advised. What we want is evidence about authentic human beings. None of us is entirely good or bad in the logical Schopenhauer way. We waver about in the most disconcerting fashion. What standard has Schopenhauer by which to test changes in character? Is it not simply that he has adopted a thesis, and worked up something like arguments to support it? The "intelligible" character may be all that he says it is. We cannot get at it to apply tests. But when it comes to the "empirical" character we find that experience does not bear out his theories. Such *a priori* generalisations are being more and more called in question, and put to the test by statistics and experiment. It will be time enough to worry over the depressing dicta of Schopenhauer when we have some evidence in their favour.

Herbert Spencer is sometimes quoted on the side of the immutability of character. But he occupies quite a different position from that of the high *a priori* philosophers. As a matter of fact he does admit the possibility of a change of character in the course of ages. The difficulty is in the case of the individual educand here and now before us. His argument really is that we expect too much from the communication of knowledge. Even scientific knowledge fails here. G. Compayré drives this home:

[1] *Die beiden Grundprobleme der Ethik*, in section supporting the thesis: "Der Charakter der Menschen ist konstant," pp. 51 ff.

"Yet, by a contradiction astonishing in a mind so systematic as Mr. Spencer's, the same philosopher, who swears by science alone, gives a striking proof of his own fallacy, and overthrows the hopes with which he had inspired us, for he puts aside his confidence in science when it asserts a claim to moralise mankind, and will not admit its qualifications. He does not admit that knowledge can have a beneficial effect on the conduct and habits of men."[1]

At a later stage we shall have a great deal to say about knowledge as an educational organon. In the meantime it is enough to mention that whatever be our decision on this matter, it need not affect the problem of the immutability of character. Spencer offers no real argument for it.

Relegating, then, individuality to a place among the data, but keeping personality as a possible field of operations, the educator must assert very emphatically his claim to deal with character. He must learn as much as he can about the individuality and the *naturel* of his educand, and here the newer quantitative methods will be of great service to him. It is becoming easier every year to estimate the real possibilities of each educand. The educator is therefore presented with a much clearer statement of the data of his problems. The advantage of such a statement is obvious, and if, in addition, some knowledge is acquired of the forces that are concerned in the formation and development of the qualities that make up the original endowment, there will be a good prospect of adequate development of educational theory.

The educand born into the world with his fixed endowment, his *naturel*, begins life as a sort of field of operations for two forces that sometimes work in harmony, but frequently oppose each other. These forces—known as heredity and environment—are themselves included among the educator's data. They work apart from and independent of him, and all that he can do is to find out as much as he can about them in order that he may be able to apply his acquired knowledge to his special problems.

Heredity has already done its work before the problem

[1] *Herbert Spencer and Scientific Education*, p. 87.

of the education of any individual arises. Hence its place among the data of education. The educator's interest in it is twofold. With regard to the case of the educand now before him the important point is to find out as much as possible about what heredity has already done. It may be impossible to undo what has been done, but it is of the first importance to know exactly what are the effects of heredity in the case now before him. But in addition, the educator is interested in the future as well as in the present. What is done for any particular educand will not in all probability exhaust itself in him. The results of the educator's work pass on from generation to generation, and a competent knowledge of heredity will enable him to make the best use of his opportunities while working at the long range of futurity, without interfering with the success of his short range work that is confined to the life of the individual. Eugenics forms no part of Education as viewed from the standpoint of the professional educator, but in the hands of the statesman whose view of education covers many generations it may well be that the laws of heredity have a practical value even on the physical side. The educational theorist is not by any means confined to the here and now. His work is the study of the moulding of men, and anything that helps him in his work must be regarded as part of his subject. He must therefore look backward in order to understand the nature of the educand here and now before him, and forward in order to see how his present action is likely to affect the future development of the educand's descendants.

As a common principle of life heredity is, and has long been, generally accepted. All our ordinary life is based on the assumption that the qualities of the parents are passed on to the offspring. It is not questioned that even their peculiarities are perpetuated in this way, though there is a great deal of variety and uncertainty in the manner in which these peculiarities are distributed among the offspring. Certain more or less doubtful "laws" of heredity are enunciated, are generally accepted, and are acted upon

in practical life in connection with medicine and insurance in the case of human beings, and in connection with breeding and grafting in the case of animals and plants. But when Galton, and Weismann, and Mendel, and Burbank have done their best, heredity is still left with a wide range of freedom. Fortunately, for the educator, however freakish the action of heredity in the individual case, it is on the whole a strongly conservative tendency. Regression is its most stable feature. Whatever the eccentricities of the particular instance there is a constant force pulling back towards the original type. In relation to education, then, which has for its function the modification of the human being in some direction or other, heredity is on the whole a steadying force. But obviously this tendency to reversion towards type may exert an unfavourable influence on the educator's power, if he seeks to carry on his work beyond the present generation. Leaving out of account the direct methods of eugenics, the educator may seek to improve the race by improving the individual and hoping that heredity will carry forward his work by a cumulative process from generation to generation. It is here that he may have all his efforts thwarted by heredity's pull towards the original type.

For the educator, the fundamental problem of heredity is that of the inheritance of acquired characteristics. Put in its plainest form, the question runs: Does the child inherit from his parents qualities that they have acquired for themselves during their lifetime? Formerly we should all have agreed with those who said in Jeremiah, "The fathers have eaten a sour grape, and the children's teeth are set on edge." Now we are not so sure. We admit that "every man that eateth the sour grape, his teeth shall be set on edge," but we are inclined to leave it at that. When somatogenic modification was distinguished by scientists from blastogenic variation, a wave of pessimism swept over many who had formerly had high hopes of the possibilities of education. The arguments for and against the passing on of acquired characteristics are still

bandied about among writers on education,[1] but it can no longer be seriously disputed that Weismann has won. We are not greatly concerned here about the details of his germ theory. He may have erred in many points of great technical importance for biologists. The important thing for us is that he and his successors have practically rendered it impossible to maintain that acquired characteristics are transmitted.

After the uncertain sound of Horne with his pair of balanced lists for and against, it is reassuring to read the words with which the writer of the article on Heredity in *The Harmsworth Encyclopaedia* (1911) sums up the matter:

"There is no doubt that functional and environmental modifications are very common, and that they would be of enormous racial importance if they were transmissible, but that has not yet been proved in any one case."

In all the instances that seem to confirm the doctrine of transmission there is involved the demand for a considerable amount of time. Creatures that live in caves and become blind in consequence require a generation or two before they pass on blindness directly to their descendants. City children do not become near-sighted in the first generation of city-dwellers. Further, if in the meantime the conditions of the case are changed, the progress towards blindness or short-sightedness is arrested, and reversion at once sets in. Every educand presented to the educator offers a chance of restoring normal conditions and causing a return to type—if only the educand come soon enough under the educator's influence.

It is worth noting that in education we are specially liable to the fallacy of apparent transmission. Characteristics acquired by the fathers may appear among the children not because they are transmitted, but because they

[1] Cf. H. H. Horne's *Idealism in Education* where we have on pp. 25 and 26 a list of characteristics that are transmitted, and on pp. 27 and 28 a list of some that are not. He concludes, however, against the transmission in general.

are again acquired by the children. Scientific men tell us that the mere reappearance of genuine modifications generation after generation does not touch the question at issue, if the inducing influences also persist. A newly introduced sour grape will set the father's teeth on edge, and the quality will certainly be transmitted to the children if the grape is also transmitted to the family. The qualities the father acquired at Harrow will no doubt be transmitted to the son whom he sends up to that school duly primed with old Harrovian traditions. This fallacy of apparent transmission though leading to a scientific error may bring consolation to the educator. If he is bent on transmitting certain characteristics he may be greatly disappointed that they cannot be passed on by heredity, but if he discovers that there is another way so like heredity that it is apt to be mistaken for it, he may acknowledge the technical error, but rejoice in the opening of another way to reach his goal.

Mr. Bernard Shaw takes a certain pleasure in pointing out that Weismann and his followers have clipped the educator's wings. He tells us:

> "The bubble of heredity has been pricked.... The certainty that acquirements are negligible as elements in practical heredity has demolished the hopes of the educationists as well as the terrors of the degeneracy-mongers; and we know now that there is no hereditary 'governing class' any more than a hereditary hooliganism."[1]

But the educator need have no quarrel with these comments. His withers are unwrung. It is hardly fair to regard the demonstration of the fallacy of the transmission of acquired characteristics (if it is demonstrated—as the educator may honestly hope it is) as a calamity for education. The fact works both for and against the educator, but on the whole the balance is in his favour. No doubt it frustrates the hope that by accumulated improvements in succeeding generations, the educator may produce an

[1] *Man and Superman*, p. 25.

ever improving set of human beings. The educator's work has therefore been somewhat unreasonably compared to the labour of Sisyphus. He has no sooner disposed of one set of educands than he must start afresh with another, and begin all over again. Each new human being that is born into the world must be treated as if his forefathers had received no education. Each baby must begin at scratch. But it is just here that consolation begins. Is it not a gain rather than a loss that a baby must begin at scratch? Is not the loss of an hereditary governing class more than compensated by the disappearance of an hereditary hooliganism? Is the educator's dismay at losing the paid up capital of his previous work any greater than his dismay at seeing the sort of material that comes to him from parents who have acquired characteristics that would, if transmitted, make the work of the educator hopeless? Think of the joy of knowing that from however bad a home a child comes—if only he comes early enough—he brings with him no handicap from his parents' sins. This is well illustrated in the experience of municipal and other authorities who have taken sensible means of reclaiming the offspring of depraved and criminal parents. Confirmation is to be found in the careful records which the Glasgow municipal authorities have kept of some 630 cases of children removed from evil environment when still very young, and sent to the country to be brought up in ordinary families at the expense of the municipality. Of the 630 children whose career has been kept under close observation for years, only twenty-three have gone wrong. Yet these children came from the worst possible stock.[1]

Dr. F. H. Hayward in his very vigorous little book on *Education and the Heredity Spectre* so far from regretting the loss of the power to transmit acquired characteristics glories in the freedom and plasticity that results from the displacement of heredity from its dominating position. "Heredity, after exalting plasticity to

[1] See an article by Professor Sir Henry Jones in the *Hibbert Journal* for January 1906. Evidence to the same effect is given by Dr. Barnardo.

premier place in the state, found itself ousted by its own deputy."[1] In other words heredity at the organic stages of development prepared the way for that plasticity of soul that marks the present. Dr. Hayward quotes Professor Ray Lankester:

"Educability can be transmitted—it is a congenital character; but the *results* of education cannot be transmitted. ... To the educable animal the less there is of specialised mechanism transmitted by heredity the better. The loss of instinct is what permits and necessitates the education of the receptive brain."[2]

And Professor Ritchie:

"Civilisation is the sum of those contrivances which enable human beings to advance independently of [biological] heredity."[3]

From the point of view of the acting educator, then, the present state of the heredity problem is far from unsatisfactory. He gains a great advantage from the fresh start that is possible in each individual case. This does not of course mean that he begins in each case with a clean sheet. The idiosyncrasies of the educand are left as prominent as before. We are no nearer than we were in times past to a supply of perfectly plastic and receptive pupils. They will be just as individual and wayward as hitherto. But there is this very important difference, that they will not be burdened or benefited by the peculiarities acquired by their parents, except in so far as these peculiarities have been imposed upon the educands by the social surroundings in which they have been or are placed. This may seem a distinction without an important difference. What comfort is it to the boarding-school master to whom a boy is sent at thirteen that the bad characteristics the youngster brings with him were acquired in his father's house, and not brought with him into the world? But there are two very important differences involved. In the first place it would have been possible, had the pupil been sent early enough, to avoid all the disagreeable characteristics. There

[1] *Op. cit.* p. 23. [2] *The Kingdom of Man.*

[3] *Darwinism and Politics*, p. 132.

is surely all the difference in the world between having and not having the power to determine the educand's characteristics in certain directions, even though in a particular case, that is, after a particular age, objectionable characters may have been formed. Then in the second place the characteristics not being congenital are removable. No doubt it would be infinitely better if they had never been acquired, but surely it is a very valuable advantage to be able to remove them whatever the cost.

The influence of the environment is thus the third of the data of education, and from the point of view of the practical educator is the most important of all. The educand's qualities must be taken as they are given. All that education can do at short range is to supply useful information, though at the long range it may, when that study has established its position, call in the aid of eugenics. But in the matter of environment the educator can take a hand. He may manipulate the environment, and in this way produce a definite effect upon the educand. The importance of environment cannot be better illustrated than by referring to the fact we have observed already that its effects are sometimes confounded with those of heredity. What the educand does not inherit from his people in the direct line of the body he may inherit indirectly from being born into their environment and having to adapt himself to it. So close is this connection between the effect of environment and of heredity that it has been found necessary to coin a phrase to meet the case. It has become customary to speak of certain elements that form part of environmental influence as constituting "social heredity." Under ordinary circumstances social heredity strengthens and supports what may be distinguished as bodily heredity. For the parents have usually lived in the same environment as that into which the child is born, and have been themselves strongly modified by it. Both forms of heredity were therefore at work at the earliest stages of cosmic education when the human race was being worked up into the state at which deliberate education became possible for man.

While the environment is to some extent in the power of the educator, it must not be forgotten that there is a great deal that is beyond his control. The educand is born at a particular time and at a particular place in which as a rule he must live. He is introduced into a fixed set of social arrangements, most of which are beyond the control of the ordinary educator. Yet under favourable circumstances the educator can modify a large number of the elements that go to make up the environment of his educands at a given time, and even under the worst conditions, say in a slum school, he can modify at least some of them.

So important are the environmental conditions that the educational process as a whole may be described as the absorbing and being absorbed by the environment. By the mere process of living, the child gradually takes in a great deal of his surroundings: he adapts himself to meet varying conditions. He assimilates his external surroundings, and to that extent may be truly said to absorb his environment. At the same time he is gradually fitted into this environment. He becomes a part of it, and may therefore be said to be absorbed by it.

Absorbing one's environment is obviously a process that results in the acquiring of what is usually called knowledge, and this accounts for the importance attached to knowledge at various stages in the evolution of educational theory. We shall find that knowledge is sometimes prized for one thing and sometimes for another, but we need not be surprised at the commanding position it takes up in education when we consider how fundamental it is in fitting the human being to take his proper place in the world.

The function of social heredity is to pass on from generation to generation the gains that advancing civilisation brings. What education loses through the breakdown of the claim that heredity passes on acquired characteristics is more than compensated by the increased richness of the stores that social heredity is capable of transmitting. There is a *prima facie* difficulty in accepting this substitutionary

work of social heredity. It seems reasonable enough, in view of our knowledge of the development of organisms, that the brain and nervous system should by gradual changes in structure and increase in complexity adapt themselves to the acquiring of more knowledge and of more varied kinds. But in the working of social heredity we seem to assume no change in brain or nerve structure, and yet we expect each generation to assimilate always a little more than the preceding. The capitalised knowledge of the race is steadily increasing, and each new generation is called upon to assimilate not only all that its predecessors had to master but in addition all that has been learnt since the educational period of their predecessors. One would expect education to break down under its own weight, after the manner of that plan of always starting from the beginning that reduced to an absurdity Jacotot's method of teaching to read.

But may the difficulty not be met in the same way as Jacotot met his? It is true that after a certain number of repetitions from the very first word in the passage to be read, there comes a time at which the whole lesson-period would be taken up by reading the passage only once. But long ere this stage was reached it was found in practice that the pupil had thoroughly mastered the early portions, so that it would have been ridiculous to keep him going on repeating them. It is not necessary that each new generation should begin at the very beginning in order to end by acquiring the whole stock of knowledge available in the subject being studied. A process of abbreviation goes on in the mastery of each subject, and what took mankind a generation to learn may be gathered up by a youngster in a few weeks, sometimes in a few hours. It is part of the theory of teaching now, that wherever possible the pupils should be made to learn the various parts of a subject in the order in which these parts were mastered by the race in its working out of that subject. But this principle has to be applied only in a general way. It is recognised that the pupils can never be really placed in the position of the

original discoverer. The circumstances of the two cases are so totally different that in most instances only an appearance of similarity can be maintained—though occasionally in the higher branches of a subject—say, chemistry—advanced pupils by utilising contemporary accounts of what was known at particular dates may read themselves into a state of knowledge very similar to that of the discoverers at the period studied. But we can never get rid of the fact that the original discoverers were mature men and women while the school pupils are mere children. Further, there is a world of difference between discovering knowledge and acquiring knowledge that is already won and has been prepared for our assimilation.

The assimilative power of individual minds is not an important element in the value of social heredity in passing on the gains of one generation to another. An average twentieth century child of fourteen, thanks to what social heredity has done for him, could instruct Aristotle on many points on which that philosopher was in doubt. But to attain this position it is not necessary that the child should have a brain more highly developed than Aristotle's.

We are not to confound the total amount of knowledge available to-day with the advance in knowledge of the individual. No human mind, however well organised, could contain even a respectable fraction of the total mass of knowledge now available. As early as Bacon's time it was only by a figure of speech that a man could take all knowledge to his province. But to-day no one makes the claim even figuratively. Yet the race is able to pass on from generation to generation the gains of all the centuries. By a system of division of labour and of interpretation the human race is able to keep up a knowledge of all the abstruse and difficult details, and yet make very wide practical applications of a knowledge that is confined to a comparatively small number of experts. Take, for example, the wonderful discoveries that have been made and are being made from day to day. The twentieth century is

supposed to know these things, but its knowledge is in most cases confined to an awareness of when to press a button.

If then social heredity can do all that is necessary, and can fit its methods to suit the needs of different mental capacities, it is clear that education need be in no way dismayed at the failure of heredity to carry over acquired characteristics. So far from being trammelled by this failure, education is really set free from restrictions. After all, social heredity can be regulated to a much greater extent than can bodily. We do not need to go centuries back to get a leverage. We can begin on the spot. The use to be made of social heredity, as thus interpreted, will be made clear when we come to consider the attitude taken up by those writers who, following Herbart, claim to be able to modify directly the human soul.

The fourth fundamental datum of education is time. Regarding education as a cosmic process, we find that time is of the very essence of the problem. We shall see that within historical times the progress of the education of the human race has been remarkably slow, while, when we fall back upon the organic stages, the consumption of time is prodigious. Historians sometimes exercise themselves in trying to estimate the cost of moral progress by calculating the number of years or centuries certain improvements have taken to come to fruition. But in race education we seem to have an almost unlimited time at our disposal; when it comes to the case of the individual, we find that the time element becomes a very definite datum in the problem. Not the whole of the three score years and ten are available for education in the technical sense of that term. No doubt it is true that in a way we are being educated all the time, and that the process begins in the cradle and ends only at the grave. But practically we all know that only a limited number of years can be set apart for education. Sometimes, as we shall see, we glory in the fact of our long helplessness in childhood as an indication of the higher civilisation for which we are intended; but the

privilege has its price, and an important part of educational theory is to discover the best way in which that price may be paid.

Underlying all the popular views of the meaning of education is the belief that it is the preparation for a sphere of life that has not yet been entered. The most common form of this belief is represented in the saying that education is the apprenticeship of life. The implication is that while the young human being is an educand he is not really living. True life lies before him; all his present activity is merely a preparation for what is to come. This parcelling out of life into preparation period and realisation period is radically unsound, though it may be accepted as a convenient classification if it be recognised that it is no more than a classification, and does not commit us to the view that life is not an organic whole in which each part has a meaning and value of its own as well as being a step in a process. Childhood has a meaning and a value in itself apart from its value as a stage on the way to maturity. The better a child is as a child, that is, the truer he is to his child nature as such, the better man will he make when the proper time comes. Practical common-sense people are very apt to regard childhood as a thing to be regretted, a period to be abbreviated as much as possible. Locke regards early childhood as a period during which, since it is impossible to have reasoning, we should work with the memory as much as we can, and thus prepare the way for the period at which reasoning begins. Many teachers impatiently tolerate the childish period, consoling themselves with the knowledge that the child will soon "get sense." Even so great a man as Dr. Thomas Arnold regarded it as the educator's duty to anticipate the period of manhood among his boys.[1] The great argument of Edmond Demolins in his *L'Éducation Nouvelle* is that young people should be brought as soon as possible into direct relation with the real things of life and the correlative responsibilities. "Treated as men, children actually and

[1] See J. J. Findlay's *Arnold of Rugby*, pp. 148-155.

speedily become men." [1] The organic view of development is opposed to all this hurry to anticipate nature. In the newer theories of the nature of play we have this point well brought out. It is of the essence of childhood that there should be play. That is what childhood is for. In the opinion of Karl Groos the child does not play because he is a child, but he is a child in order that he may play. It is now generally recognised that the long period of helplessness in childhood, and the need for a period of preparation are correlated with greater power of adaptation, so that what is regarded as a disadvantage by the short-sighted practical man is really a mark of an exceptionally high grade of life.

Sometimes the figure of apprenticeship is extended to the whole of life, our existence here being treated as merely a preparation for another and a better world. This view of a life-preparation for a future state is in no way inconsistent with the view that our present life should be treated as a rounded whole, having a value in itself. What has been said about childhood in relation to the whole of human life may be applied to our present life in relation to a future one. We shall best prepare ourselves for a future life by making the most of this. A state of pupilage must not be regarded as a state of suspended animation. The present is as much a part of the educand's life as is the future for which he is being prepared.

An important point to be settled is the stage at which education should begin. Here Richter answers with commendable definiteness: "When does education begin its work? With the first breath of the child but not sooner." [2] In his own mystical way Froebel throws the beginning a little way farther back: "Man must be considered and fostered even from birth, as indeed it was with Mary from the moment of annunciation while yet invisible, while yet unborn." [3] Even the annunciation is far too late to meet the

[1] "C'est ainsi que ces enfants, toujours traités en hommes, deviennent réellement et rapidement des hommes." *Op. cit.* p. 73.

[2] *Levana*, Third Fragment, chap. i. 39.

[3] *Menschenerziehung*, section 15.

view of the eugenists. Education ought to have begun aeons ago. We cannot, they maintain, go too far back in the process. What we are to-day is the result of what happened thousands of years ago: the education given to-day will bear fruit in all ages to come.

We need here only refer to what has been said under the head of heredity. So far as the physical development of the race is concerned, we must go very far back before we get to the crucial turning points, but with regard to the education of the individual here and now—in the ordinary sense of the word education—it may not be desirable to go further back than Richter suggests. There is a satisfactory definiteness about his view that commends it to the practical person, and if his insight is justified, as seems to be the case, by the results of recent studies in heredity, we cannot do better than take him at his word.

Limiting ourselves to the present life, the unit with which the educator has to deal is the whole life of the educand. No doubt the actual processes of education are limited to the earlier portions of that life, but to secure successful work the educator must take account of the life as a whole. The nature of the life for which the pupil is being prepared must exercise a certain influence on the activities of the educator. He must not, it is true, allow the peculiarities of the educand's probable future life work to exercise an undue influence in modifying his processes. The general and the special must be kept in their proper proportions. But it will be shown when dealing with specific education that there is not such a gulf as is usually supposed between the general and the special. In any case it has to be remembered that the true test of the value of education is the result it produces in that mature life that lies out of its immediate influence. No doubt in a certain sense we are always being educated: what the school leaves incomplete the world finishes. But all that this implies is that we are always being acted upon by forces that make us different to a greater or less extent from what we were before. The fact remains that there is a plastic period

during which education does its best work, and after which its effective power rapidly diminishes. It is obviously of great importance to determine the limits of this plastic period. We all very rapidly take a set, and psychologists warn us that "fogeyism" sets in at a much earlier age than one would naturally expect.[1] That exaggerated appreciation of youth known as Oslerism is the popular recognition of the importance of this plastic period.

To the law of diminishing returns one must look for a principle on which to base our attempts to determine the limitations of the plastic period. Education certainly produces results at all ages, even the most advanced. We have wonderful tales of men beginning studies at a great age, and carrying them on successfully. Still more important from the practical standpoint is the fact that under stress of circumstances individuals of mature years have unlearned much, and have substituted a great deal of fresh matter. But in these cases the ratio between the effort expended and the result produced is so unfavourable as compared with what is the case at earlier periods that we are discouraged from all attempts at systematic education after maturity,[2] unless under the most exceptional circumstances. Sometimes in real life as in warfare we have to expend effort in a very wasteful way in order to secure an end that must be gained at any cost. But in the steady work of education we of course avoid this extravagance.

Having the limited time at our disposal thus dinned into our ears, it is natural that we should go to excess in our efforts to avoid waste of the valuable periods. But it is

[1] Professor James: *Principles of Psychology*, vol. i. p. 121. "In most of us, by the age of thirty, the character has set like plaster, and will never soften again.... Already at the age of twenty-five you see the professional mannerism settling down on the young commercial traveller, on the young doctor, on the young minister, on the young counsellor-at-law."

[2] Solon was under a delusion when he said that a man when he grows old may learn many things—for he can no more learn much than he can run much; youth is the time for any extraordinary toil." *Republic*, vii. 536.

just as dangerous to begin too soon as to put off till too late; in fact, there is a greater danger to the educand at the earlier stages, since there is a greater likelihood of interfering with the regular processes of nature.

"If we take knowledge of things too soon, and only of the one after the other, the greater part of their characteristics will escape us, and our thought, still little practised in these problems, will certainly not seize, and will not be able to gather together into a whole, the diverse notions which an experience slowly acquired gives us separately upon the same subject."[1]

This is the waste of energy that stirs up Rousseau to repeated warnings. Why, he asks, should we give our pupils the trouble of learning the same things twice? It is doubtful, however, whether it is always a mistake to make a pupil learn the same thing twice. Everything depends on the degree of detail in which the subject is studied in relation to the powers of the child's mind at the time. The very successful Concentric Method owes its value precisely to this learning over again in greater detail what has been already mastered. This tendency to hurry educational processes has given rise to such serious consequences that some French writers go to excess in fighting it. To begin with they have given it a technical name *l'éducation prématurée* to which whole chapters are sometimes devoted. Then they proceed to show that it is universal:

"Education is always premature. It is premature from the cradle. One speaks too quickly to children, one makes them speak too quickly. From this there result inconveniences for language . . . *psittacisme*. Moral instruction is as premature as instruction properly so called."[2]

Probably this is overstated. The educand must always be dealing with something just a little bit beyond him. The danger lies in those cases in which—unlike that of learning the mother tongue—the educand is quite unfitted to apply the knowledge as it is acquired. It then tends to

[1] Lotze: *General Principles of Physiological Psychology*, Preface.
[2] L. Dugas: *Le Problème de l'Éducation*, p. 52.

disappear altogether, and has to be recaptured by entirely fresh efforts when the need for it really arises.

One naturally turns to psychology for help in determining the plastic period during which education may be profitably carried on. But Psychology, in the past at any rate, has been curiously indifferent in the matter of age. She has been quite willing to give general statements, excellent in their way but difficult in their application by the actual educator. For example, the limits we are at present on the search for are expressed by Edouard Raehrich in terms that exactly illustrate the old psychological method:

> Education "is exercised then between these two extreme limits. 1st. The original nature, to which comes to be added the acquired nature; 2nd. The formed will. The educator is powerless to modify either the one or the other of these two realities."[1]

Naturally the educator wants to know at what age the will may be said to be formed, but Psychology has centred her interest on the mature adult, with an occasional excursus into the experience of the newly born. With the development of genetic psychology and the spread of what is known as child-study, we find the question of age coming prominently forward. It has to be admitted at once that there was a great deal to justify the old attitude. The educator's desire for definite ages cannot always be honestly gratified. There is a considerable danger of error so soon as we begin to divide up the life of the educand into definite numerical units. Auguste Comte evidently felt the danger of his classification of educands by ages, for he tries to justify the limiting ages by reference to some physiological or sociological process or event that marks each of them. Thus his first period dealing with *spontaneous* education is divided into two, the first ending at seven (coinciding with the second dentition) and the second at fourteen (puberty). The second or *systematic* education ends at twenty-one (coming of age). It will be noted that the end of the *spontaneous* period also coincides with the beginning of apprenticeship.

[1] *Philosophie de l'Education*, p. 54.

Rousseau too is not afraid of figures, though he is more arbitrary in his periods. These form three: (1) up to 12, (2) from 12 to 15, (3) from 15 to 20. Kant, too, in his curious mixture of the practical and the theoretical, gives an upper figure in answer to the question: How long should education last?

"Till the youth has reached that period of his life when nature has ordained that he shall be capable of guiding his own conduct; when the instinct of sex has developed in him, and he can become a father himself and have to educate his own children. This period is generally reached about the sixteenth year."[1]

Here again is the very evident desire to find some rational ground on which to base the educational limit of time. The needs of education have indeed become clamant in this matter of age distinctions, and psychologists are now beginning to meet them. Even psychologists, however, do not see their way to give hard and fast lines confined to individual years, so it has become customary to deal with groups of years rather than with fixed ages. Thus Claparède[2] gives us the following classification of the years that precede maturity.

	Boys.	Girls.
1. Early Childhood, -	up to 7 years	up to 6-7 years
2. Later „ -	from 7 to 12	from 7 to 10
3. Adolescence, - -	from 12 to 15	from 10 to 13
4. Puberty, - -	from 15 to 16	from 13 to 14

From actual observation of the ages most frequently referred to in books on the theory of education and in documents connected with educational administration, the following ages will be found to stand out prominently:

3, 5, 7, 10, *13-16*, 18, *21*, 24

It may be a little fanciful, but it almost appears as if there were a certain rhythm in this list, the italicised numbers representing the more important stages. The first three years represent the period of maximum development.

[1] *Thoughts on Education*, p. 26 (Churton's translation).

[2] *Psychologie de l'Enfant*, p. 65.

Probably no other period in the history of the human being can show the same amount of progress. "A circumnavigator is less influenced by all the nations he has seen than by his nurse."[1] Many of the writers[2] on early childhood emphasise the importance of the first three years, so this may well be recognised as one of the major periods. The age of five is very frequently referred to in connection with the beginning of more or less formal education, but it is much less prominent in this connection than the age of seven. This latter age is the almost universally recognised time to begin regular school work in a system of national education. It was the age at which in Sparta the child was removed from its mother's care, and at Athens this was the age at which the boy went to school. With us ten is the age that is specially characterised as the preparatory school period. It is also sometimes connected with certain psychological maxima, but it cannot be regarded as one of the major periods. There is never any question about the importance of the 13-16 period: physical conditions render it impossible to neglect its significance. With regard to the remaining three ages quoted in the list, they are determined more by social conditions than are the preceding. Eighteen is the natural ending of a secondary school course, twenty-one of an ordinary university course leading to a first degree, twenty-four of a professional course leading to a qualifying degree.

It is true that certain professional courses extend beyond the age of twenty-four or twenty-five. Among the Jesuits, for example, the highest theological course is not completed till the thirty-fourth year. Such a prolonged period of study is, however, quite exceptional, and it will not be seriously questioned that after 24-25 the young person should cease to be technically an educand, and should enter on the business of life. It does not follow that he will cease to learn: he may still be regarded as an educand

[1] Jean Paul F. Richter: pref. to first ed. of *Levana*.

[2] Cf. Bernard Pérez: *The First Three Years of Childhood*; W. Preyer: *Mental Development in the Child*.

from the cosmic point of view. Society may go on educating him. But he has ceased to be the object of direct and deliberate human education. To be sure in the vast majority of cases the young person passes from the educand state at a very much earlier age. There are obvious reasons why it is impossible to define the lower limit of the educand period. But in practice the upper limit coincides with the limit of the plastic period. Economic conditions make it impossible to give to education more than the period ending in the twenty-fifth year, and psychology approves by showing that at this period the really fruitful plastic period ends.

CHAPTER III

THE HISTORICAL ASPECT OF EDUCATIONAL THEORY

In considering the passing states of consciousness that make up our mental life, psychologists assure us that "the present moment of consciousness is the darkest in the whole series... nothing can be known about it till it be dead and gone."[1] In order to understand the present moment it is necessary to let it die and then compare it with what preceded and what followed it.[2] To understand the educational theory of the present we must regard it in the light of what has gone before and what is likely to come after. Among the qualities that make man such a noble piece of work Shakespeare includes that of "looking before and after." For the mere carrying on of ordinary life this back and forward survey may not be necessary: we may act in the living present without reference to either the past or the future. But when it comes to understanding, the present owes its significance to its relation to the rest of the series of which it forms a part. "*Practically we perceive only the past*, the pure present being the invisible progress of the past gnawing into the future."[3] It is from this point of view that History acquires a practical importance. We are told that we must study the past in order to understand the present and prepare for the future.

For the sober student, then, History is no mere record of chance happenings. There is an underlying meaning in

[1] W. James: *Principles of Psychology*, vol. i. p. 341.

[2] Cf. H. Bergson: *Matter and Memory*, Eng. trans., p. 176-7.

[3] H. Bergson: *Matter and Memory*, Eng. trans., p. 194.

the course of events that gives them a significance in a higher and truer sense than occurs to the ordinary reader of tales. History is no mere endless serial story, whose meaning is ever lost in an irritating "to be continued in our next." Events are only the exemplification of the working of immutable laws. This truth has penetrated deep enough into the human spirit to reach that level marked by the crystallisation into proverb. When the plain man asserts with surprised interest that "History repeats itself," he is proclaiming a truth greater than he thinks: he is asserting that the happenings of History are only the individual instances of the application of eternal law.

It is true that not only does the plain man not quite realise all that this implies, but even the philosophical writer is sometimes not quite assured of the truth of his thesis, since he frequently expresses it in the form of a problem. He asks deliberately whether it is possible to have a science of History.[1]

It is not questioned that there is now a science in the *writing* of History. No doubt whatever exists that the manipulation of the written and other data of History is carried on in a thoroughly scientific way. No one questions the scientific standing of such matters as are indicated by the terms Historiography, Historic, Diplomatic. It is when we get down to the subject-matter of History that the trouble arises. The sifting and presentation of this matter may be done on quite scientific principles. The analysis and criticism of partisan records, for example, supply abundant scope for the most severely scientific methods, but so far as the facts recorded are themselves

[1] Some writers prefer to speak of the *Philosophy* of History, but practically they mean the same thing. Professor Flint, who carefully discriminates between the shades of meaning, is content to employ the terms interchangeably. "Rigidly and continually to distinguish them is not only what no one does, but what no one should do, inasmuch as it tends to lead readers to overlook the intimate connection and community of nature, of science and philosophy." *History of the Philosophy of History*, p. 19.

concerned, they are here treated practically as data. The classification of historical facts may be very scientifically carried out, but after all this leaves the study of History largely at the natural history stage. There is an uneasy feeling in many minds that when we get down to the hard pan of the subject matter of History—the thoughts and motives and deeds of men—we are in a region where the principle of causation is not so rigid as elsewhere, and ordinarily it is not recognised that a higher or more complex but not less necessary law than natural causation rules in the region of man's history. No doubt the idea of evolution has introduced a steadying element. The deeds of men are no longer to be merely classified. There is obviously some law working underneath all the apparently inexplicable inconsequence of human actions. History is now emerging from the natural-history stage. Excellent classificatory work has been accomplished, and the theory is now winning acceptance that what has been done for the history of the material world may be done for the history of human affairs. The natural impression of a thoughtful man is that while it seems reasonable enough that dead matter and the organic world should evolve in the way that geology and palæontology teach, it is different with the infinitely complex human life. No doubt a great advance has been made when we have granted the evolution of the higher forms of life from the lower. We do not require to admit the Darwinian theory either in Darwin's own form or in Browning's misrepresentation of it in *Prince Hohenstiel-Schwangau:*

> "That mass man sprung from was a jelly lump
> Once on a time; he kept an after course
> Through fish and insect, reptile, bird and beast,
> Till he attained to be an ape at last
> Or last but one."

All that we require is the acceptance in a general way of the idea of evolution.

Many who see no difficulty in accepting the evolution of matter into higher forms as exemplifying the development

of a pre-existing idea, and very little difficulty in accepting the evolution of the lower forms of life into the higher, fail altogether to accept evolution as applied to human life. Here they say the conditions are not the same. Here we have a new element, an element that does not enter into our calculations at all at the lower stages. Dead matter can be readily moulded to suit the needs of a living idea. Animal life can be moulded too, though with more difficulty because of the presence of this thing called consciousness.[1] But in the case of human beings we have more than consciousness, we have self-consciousness. Accordingly these critics ask: Can a self-determined being possessed of self-consciousness be a mere pawn in the game of a higher consciousness? We are all units in the Kantian kingdom of ends. If, then, we are ends in ourselves, how can we be the mere means to the ends of another? If human society is working out the idea that is immanent in its very nature, how can the individual work out the idea that is immanent in him? We have to consider whether it is possible for a science of History to co-exist with the free and full self-development of the individual ego.

The ambiguity of the word *conscious* of which we have already spoken helps us a little in understanding the difficulty that has here arisen. Among practical English people there is always a certain irritation with any theory that represents men as seeking various ends unconsciously. If we seek an end, then we must be conscious of it. But it may well be that we are *attaining* ends all the time without being aware that they are ends. In this case the

[1] Cf. Bergson's view that living beings are just "centres of indetermination." *Matter and Memory*, p. 28. But these centres are not free and cannot be selves. Freedom and self-hood both imply self-determination (not chance), that is a kind of determination that is so complete as to be applicable only to a whole. In the ordinary lines of causes and effects we are always seeking what really determines, and are ever referred back. Hence the determination or necessity of freedom (or of self-determination) is fuller than that of nature. Hence self-consciousness, which alone makes self-determination possible, so far from being an obstacle to freedom is the essential condition of freedom.

whole trouble arises from regarding them as *our* ends. We are not here speaking of that vague yearning after we know not what. That has its place in human life. Most of us set up our little altar to the unknown god. But in so doing we are seeking to attain an end. We are conscious of our seeking, and even, in a schematic way, of the end we have in view. But it is quite reasonable to believe that we are in many cases seeking one end consciously and deliberately, while at the same time we are attaining not only the end aimed at, but another of which we are unaware. Psychologists are beginning to warn us against our own rational explanations of our actions. We often think we have been acting as the result of reason, whereas we have been mainly reacting to certain external stimuli. The reasons we supply for our conduct after the fact very frequently satisfy ourselves and even our friends, and are yet mere rational afterthoughts invented to explain to ourselves our conduct[1] which would otherwise appear (though it need not necessarily be) unreasonable.

As a matter of fact we are never fully conscious of the idea which we are working out. We must deal with ideas of sufficient width to give us guidance in the affairs of life, and yet of sufficient narrowness to be capable of application to concrete cases as they arise. A just complaint against the noble ideas of certain enthusiasts for humanity is that their ideas are not explicit enough: they are not articulated: they cannot enter immediately into our lives. We cannot, for example, deliberately set about the task of loving humanity. The genius may take a step or two in advance of the ranks of ordinary men, and may thus keep them in the right direction; but the ordinary man can follow only in so far as his leader has supplied the over-wide ideas with a suitable content.

As a boy in school may be said to be working out the idea that vitalises the school system under which he is being educated without being conscious of that idea, so the in-

[1] Mr. Graham Wallas's *Human Nature in Politics* supplies many excellent examples. See particularly chaps. i. and iii. of part i.

dividual man may be regarded as working out in his life the underlying idea of what is vaguely called the nature of things. Boy and man alike are fully aware of a great number of immediate ideas that appeal to them and rouse them to definite action. It does not follow that these immediate ideas are in any way in conflict with the dominant underlying idea. The possibility of a science of history really implies the view that the history of the world is the record of the development of this underlying idea. If we deny the underlying purpose involved in the view that the world is the development of an idea, it is difficult to see how we can avoid the conclusion that there is no possible science of history. Max Nordau maintains that history as at present written cannot be regarded as anything but a work of art, a poem or a drama, but not a scientific study based on a causal relation among the elements involved. On the other hand, those who claim to be serious historians speak slightingly of the artistic side, and maintain that the only things with which the historian may legitimately concern himself are underlying causes. Nordau defines history as "the sum of the episodes that make up man's struggle for existence," [1] and laughs at all attempts to deal with this sum in a scientific way. According to him there is no philosophy of history. Hegel, he maintains, merely begs the question: "Hegel's sole postulate is that history is a rational process. But this postulate is, in fact, precisely the *thema probandum*." [2] It has to be admitted that the Hegelian phrases "reason as governing the world, the world's process as a rational process" [3] involve an assumption. The *thema* cannot be proved, is not susceptible of proof. But on the other hand it is the only assumption on which any treatment can be carried on. It may be impossible from the nature of the case to demonstrate that the world is rational, but if the world is not rational it does seem a hopeless proceeding to examine it by the light of reason, and to use reason to demonstrate

[1] *The Interpretation of History*, p. 14. [2] *Ibid.* p. 69.

[3] Hegel: *Philosophy of History*, p. 12.

the non-existence of reason. This fundamental assumption of idealism will be dealt with later; in the meantime the following is not a bad way of putting the matter: "Philosophy means a larger and unproven view of facts."[1] Hegel *might* argue that history is an accumulative proof: that nothing is done, in the ultimate resort, but to prove his *thema*. Philosophy, in so far as it is a reflection of human experience, is the demonstration, little by little, of a hypothesis—unproven if you will, but always proving.

Nordau soon gets into difficulties with this irrational world of his. Trouble arises as soon as he begins to deal with the question of progress. Since the cosmos is irrational there can be no such thing as cosmic progress, but only a great series of more or less meaningless changes. From primary vapour to primary vapour by way of cataclysms is the most comforting cycle[2] that he can extract from what we know of the universe. He himself is not at all satisfied with this result. He obviously recognises that there is progress of a sort going on around him, and he finally gets out of his difficulty by enclosing a certain area within which progress is possible. This area is the realm of knowledge, and knowledge depends upon our power of voluntary attention.

> "In other words, progress in the last resort is the development of the force and endurance of the human will, expressed in the intellectual spheres of attention and inhibition."[3]

It has to be remembered that this idea of progress is not so self-evident as it seems to us who are so much accustomed to the development of the sciences around us. The natural tendency is for man to look backward, rather than forward, for better things. The Greek philosophers did not have the same idea of progress as we have. The natural tendency to glorify the past led to, or at any rate accounts for Hesiod's five ages running from the splendour

[1] H. H. Horne: *Idealism in Education*, p. 145.
[2] *The Interpretation of History*, p. 304.
[3] *Ibid.* p. 305.

of the golden through the diminishing lustre of the silver, the brazen and the heroic to the prosaic iron of his present. No doubt Lucretius reached the same iron stage of the present by a totally different route. The stone age and the bronze age lead on to the iron age, but this time the progress is upwards not downwards. The substances are used in their literal sense and represent progress in the manipulation of the materials available for man's use. Lucretius, therefore, has hit upon the idea of progress in the past in the upward direction, and we may reasonably suppose that he saw at least the possibility of still further development. But we must not forget that the rhythm observed in nature cannot have been without its natural effect on men's minds. As man is born, flourishes and decays, so may the race of men.[1] The seasons and the simpler astronomical rhythms would certainly suggest the idea of recurring cycles of progress and decay. So that we need not be surprised to find all forms of change, forward, backward and rhythmic, represented in the theories of different thinkers in the old world.

Herodotus had some notion of the relation between past and present, and Aristotle certainly sees the possibilities of advancement, as is shown in the first sentence of the *Ethics*. We are there told that "everything makes for an end," and that "the good has been well defined as that at which everything aims." But it is an eminently modern tendency this pressing forward to the future in the hope of better things. Beginning with Bacon it has now become so strong that even Nordau must find some place for it in his system. What he does is to recognise progress only in the sphere in which he thinks he cannot disprove its existence. We are not in a position to prove that there is an advance in the passing from one stellar cataclysm to another, so Nordau calmly asserts that there is none. With

[1] It has to be remembered that even scientific evolutionists like Huxley include decay in the evolutionary curve. Though we are at present on the up-grade, the time for reaction will come as inevitably as the fall of the stone however high into the air it has been hurled.

regard to human progress he sees it going on before his eyes, and tells us that it consists in each generation passing on its accumulated store of knowledge to its successor. The notion of education is thus introduced, for as Lester F. Ward is never tired of telling us "Education should consist in the social appropriation of the knowledge of the civilised world."[1] Nordau is careful to distinguish between knowledge proper and the products of the imagination. He thus accounts for the apparent lack of progress from the Greek times in matters of art, and maintains that it is unfair to compare the art of Greece with that of to-day as a test of progress.[2] It follows that we may be well content to leave the stellar vapours to the fate Nordau has assigned to them: it is enough for our purpose that he recognises that reason governs, and progress is possible in the realm of knowledge and will, for this is precisely the realm in which education is prominent. Herbart emphasises this view of the sphere of the philosophy of history by showing the psychological relations between history and education.[3]

Within the limited area of possible progress, the domain of will, we are met with the most perplexing problems. We seem in fact to have lost all the advantages that belong to the study of what is ordinarily termed science. If history is to be treated as a science, it is felt that it must

[1] *Pure Sociology*, p. 574.

[2] *The Interpretation of History*, p. 305.

[3] "... wird endlich der Aufschluss über den wahren Zusammenhang der Begebenheiten von der *Philosophie der Geschichte* zu erwarten sein. Das Vorstehende errinert daran, dass die Philosophie der Geschichte von der Psychologie abhängt; und dass sie sich nicht anmaasst die Wege der Vorsehung zu erforschen.... Alle *bisherige* Geschichte ist ein Anfang, dessen Fortgang Niemand prophezeihen kann.... Was der Erzieher von der Psychologie, das fordert der Staatsmann zunächst von der Philosophie der Geschichte. Für beide sind eiserne Nothwendigkeit, die nichts annehmen, und absolute Freiheit, die nichts festhalten würde, ein gleich schädlicher Wahn. Bewegliche und lenksame Kräfte, die jedoch unter Umständen eine bestimmte Form, und allmälig einen dauerhaften Charakter gewinnen, sind die Voraussetzungen der Pädagogik und der Politik." *Lehrbuch zur Psychologie*, §§ 241-242.

have laws, and to introduce laws into the realm of will and motive is supposed to set up a permanent limitation in our treatment. In reality, what is deemed a limitation is the essential condition, the root of the possibility of either will or motive. Freedom does not come through the exceptions to law, but through obedience to an inner or self-imposed law. This point is too often neglected, and we find freedom confused with caprice which is bondage to chance, and falls below even animal action.

"One thing is certain, that in dealing scientifically with this maze of thought and action which is human history, we shall have to assume determinism as an expression of the truth. We shall have to assume that whatever a man does he does as a necessary consequence of the interaction between his nature at the given moment and his surroundings at the given moment. We shall have to assume that of absolute free will there is none at all." [1]

This is one way of making history scientific. Once the assumption of determinism is made there is a great deal of trouble saved. We know exactly where we are. We have set up a state of affairs that can be dealt with in the orthodox scientific manner. But it is doubtful if much is gained by this superimposed simplicity. The mind does not dance freely in its chains. We cannot conceal from ourselves the fact that there are certain disturbing elements that refuse to submit tamely to the limitations we have imposed. There is at the very least an appearance of freedom in human action that is extremely irritating to the man who seeks to be true to his scientific instincts. There is uneasiness in Mr. Allen's last sentence. When he qualifies the term "free will" by the epithet "absolute" he tacitly admits that there is some sort of freewill of which the historian must take account. It is surely foreign to scientific method to eliminate a difficulty that we cannot overcome. It may quite well be maintained that the problem of freewill is a matter of metaphysics rather than of history. The historian is not called upon to prophesy

[1] *The Place of History in Education*, J. W. Allen, p. 17.

with regard to the actions of individuals; he deals with humanity in the lump, and humanity thus taken is found to be uniform in its reactions. Mr. Allen himself recognises that this general uniformity is enough for his purpose. "If the great mass of human action is strictly determined, that will be sufficient for the purposes of scientific history."[1]

The possibility of a science of history is specially worthy of consideration in connection with the development of educational theory. For here we have men not only working out ideas but superintending the working out of ideas in the minds of others. The educator takes the place of a little Providence himself, and is therefore in a specially good position to appreciate the problem of History as the record of the working out of a definite purpose. He realises, to begin with, that he is a late arrival on the stage. There has been a great deal of work done preparatory to his appearance, work without which his appearance would have been impossible.

"It is necessary to bear in mind that the education of the human race which produced the high degree of development which it now possesses was nearly all secured before schools and formal studies were invented or arranged."[2]

Plainly we have to distinguish between the evolution of education, and the evolution of educational theory. Man was being educated for aeons before he himself took any part in the process as educator in the sense in which we use that term. His part was purely that of educand, the rôle of educator being left to some cosmic principle under

[1] *The Place of History in Education*, p. 21. It is interesting to note that the same demand for a limited amount of determinism is made on behalf of education itself: "Pedagogy necessarily assumes a certain determinism, for if the actions of men were not joined to one another by the chain of cause (ne s'enchaînaient pas) it would be necessary to give up the attempt to foresee the consequences of our actions; if the present was not the resultant of the past, and did not contain the future in germ, it would be necessary to cease to try in any way whatever to raise the actual generation in view of its future destiny." Edouard Raehrich, *Philosophie de l'Éducation*, p. 39.

[2] F. E. Bolton: *Principles of Education*, p. 770.

whatever form that principle may be represented. By and by man did begin to take a certain deliberate share in the education of the race, and with this beginning appears the first rudimentary theory. But this theory need not amount to anything worthy of record, and as a matter of fact we shall find that the appearance of real educational theory is very late in the history of civilisation.

There is here a certain suggestion of dualism. But it has to be remembered that throughout the process man as an element in the organism of the cosmos has his share in the educational movement. When the savage tried a new way of catching his food, he was educating himself as truly as the scientific man in seeking a new invention. He was self-conscious all along too, and not merely conscious: the difference was that the self of which he was conscious was a poor thing, and its ends were near, shallow, fragmentary. Self-consciousness or reflection is true of every bit of our life, for every act reports itself, has meaning and value, strikes inwards, and that whether we turn back on it or not. Hence man participates with the cosmos *always*, and is never a "thing." When education becomes a conscious aim in the sense that will be indicated in the following paragraphs, what has taken place is the discovery of a *new object* of thought, and a new aim for endeavour: that is all. It is the same process that goes on all through, though for purposes of exposition it is essential to indicate at least two clearly marked stages.

In the evolutionary process that may be fairly called the cosmic education of the race, there occurs what seems a wasteful process of trial and error. With her usual prodigality, Nature scatters her material broadcast on the hit-or-miss principle. After an enormous expenditure of time and material certain tendencies are established by the predominance of hits in certain directions. This is sometimes said to inaugurate a new stage, at which there is still a feeling for the way, but no longer a blind feeling. The organism has acquired a tendency to stretch out in a definite direction, and there is a corresponding saving of energy.

But there is no real gain in dividing up the evolutionary period into two stages. We cannot distinguish the one from the other. All we can say is that there is gradual progress. Human nature is slowly being worked up by cosmic processes, till at last it becomes aware of the educative process to which it has been submitted. It is not till the self-conscious stage has been reached that we have progress determined by the intelligence of the educand. He has been conscious all along, and has been doing things that formed part of his education. There is no real break between cosmic education and what we have called human education. Cosmic education goes along with and includes human education. The educand has a share in both, but the nature of his share in the later kind is so different from that in the earlier, that it is worth while to distinguish the two by separate terms. When human education has been reached, the educand has gathered the meaning of the process in which he is involved, knows the end that is desired, and spends his energy in devising means to attain that end. Up to this stage there has doubtless been direction; but the direction has come from without. We have had merely cosmic evolution.

"Human evolution, on the contrary, is the work of man—the product of the being who evolves. Man does not stand outside his own growth and plan it. He becomes aware of its possibilities as he grows, and, if we are right, there comes a stage when conception of the perfected growth seizes upon him, and makes him intelligently work towards it."[1]

There is a clear parallel to this in the development of the individual. It is as difficult in his case as in that of the race to fix the exact point at which change of attitude takes place. In neither case is there a break.

The stage just described by Mr. Hobhouse is the point at which educational theory begins, so far as human beings are concerned. Hitherto human nature has been in a process of preparation directed by some force outside itself.

[1] L. T. Hobhouse: *Mind in Evolution* (1901), p. 399.

Now it is handed over to itself to complete the process, or at any rate to have a ruling influence in guiding the process. It is against all that we know of evolutionary process to find a distinct break between two stages, yet we have here something that looks very like a breach of continuity. The human educator does not conduct the process on quite the same lines as were followed in the cosmic process. In our movement upwards we strive to "let the ape and tiger die" within us. Cosmic education has brought us to a stage at which we desire to turn our back upon the processes by which we have risen to our status as human beings. It is Huxley who says:

> "Let us understand once for all that the ethical progress of society depends not on imitating the cosmic process, still less in running away from it, but in combating it."[1]

Yet there is no real breach. The ethical point of view is a necessary outcome of the progress consummated in the physical development of humanity. Man has attained a new power as the result of aeons of preparation. The appearance of consciousness, and particularly of self-consciousness, is always a mystery, though Huxley consistently maintained that there was nothing remarkable about it, and certainly nothing mysterious. In any case the dawn of self-consciousness among those prehistoric men was no more mysterious, and involved no more a breach in natural development, than what is occurring daily in the experience of individual human beings. Further, the new point of view to which man attained did not in any way thrust him outside of the cosmic process, though it enabled him to understand that process and to take a hand in modifying it. Just as it is convenient to distinguish cosmic education from human education, though in a certain sense cosmic education may be said to include both, so it is convenient for the purposes of exposition that Huxley should limit the term cosmic process to that which went on before man took any deliberate share in his own development and rose

[1] *Evolution and Ethics*, Romanes Lecture (1893), p. 34.

to the ethical plane. But this need not at all imply that there is any break in the passage from cosmic process to ethical process or from cosmic education to human education.

In treating of the evolution of educational theory it is important to realise how recent in the history of human development is the appearance of this the highest stage. One of Haeckel's students named Heinrich Schmidt, is credited with an ingenious method of representing what is known as cosmological perspective. The whole existence of mankind is generally assumed to have lasted not less than 240,000 years. It may have lasted much longer: it cannot have lasted for less. If this period be represented by a day of twelve hours, then each hour would represent 20,000 years, each minute $333\frac{1}{3}$ years. If we imagine that we of the present are living at noon on that protracted day, the startling fact comes out that *for over eleven and a half hours there is nothing to record.* At twenty minutes before twelve the earliest vestiges of Egyptian and Babylonian civilisations begin to appear. Greek literature is seven minutes old. At one minute before twelve the *Advancement of Learning* makes its appearance. The steam engine is only half a minute old.[1] From this we get a vivid idea of two facts: first, the enormous period during which there was no progress recorded, and secondly, the exceedingly rapid progress during the final stages. It is to be noted that it is hardly accurate to say that there was nothing to record during the first eleven and a half hours. Things were going on, though we believe that they went on very slowly. The general belief is that when once man as self-conscious being deliberately sought these ends progress became accelerated and that the acceleration has been increasing ever since. It may be conjectured that the slow progress at the early stages was mainly due to the lack of deliberate education. Education of a kind no doubt there was. But humanity had no means of

[1] This illustration is taken from James Harvey Robinson's article in *The Journal of Philosophy, Psychology, and Scientific Methods*, May 11, 1911.

securing its continuity. It has to be remembered that speculators on this subject at the present day are fond of reminding us that if education could be suppressed for three generations man would be reduced to his original state of barbarism.

"If the veneering process which we call education should fail to operate, three generations would suffice to obliterate its traces—three generations in which every educational process ceased to function would take the race back to the level at which it stood at the dawn of recorded history."[1]

For ages, skill in meeting the demands of competition with animals having certain advantages over man would be acquired and some of it occasionally lost through tragic annihilation of a generation here and there. But so soon as brain had been brought to triumph over muscle, there was every chance of a permanent advance in education. Material progress is now so great that it is impossible to conceive of another dark age supervening because of the triumph of savage races. Rome could be overcome by barbarians because the difference between the mechanical ingenuity of the Romans and that of their opponents was not sufficient to make up for the numbers and the physical strength of the less civilised men. In our days if a nation of inferior education wishes to succeed against one of a higher it must adopt the simple plan of securing the higher education for itself. It is extremely unlikely that a nation would acquire a higher education in order to crush another nation, and then crush out the education by means of which it had won.

It is clear that for the purposes of history what we understand by education has its origin at the stage at which man begins to interpret himself differently, to seek the good of life as a whole, to adopt a different evaluation of ends, and as a consequence takes himself in hand, and seeks to make the best of himself both in his own person and in the generation that is to follow him. Education reaches its

[1] W. C. Bagley: *Educational Values*, p. 97.

highest level when the individual deliberately seeks to make of himself something different from what he is at present. What is true of the individual is true of the race. Peoples sometimes set themselves to modify their characteristics, and to become something different from what they are.

Modern history offers two striking examples. Prussia after Jena in 1806 was completely at the feet of her conquerors. Everything was taken out of her hands and managed by the French—everything but education. Napoleon had no time to trouble with affairs of ABC, so Fichte was left free to deliver his *Reden an die deutsche Nation* and to give effect to many of the ideals he set forth. The renovation of the German universities, and even the foundation of the University of Berlin, may be fairly attributed to the stimulus given to the national spirit by Fichte. He realised that what was wanted was the retempering of the spirit of his people, and every university and school became a base of attack against the power of Napoleon. Fichte's addresses were inspirational rather than directive. The nation received them with enthusiasm and acted upon them in its own way. While it responded in the matter of the universities and in the spirit of loyalty, it declined to accept his recommendation of the barrack-like schools that were no doubt inspired by the ancient Greek patterns. Instead, the Germans adopted the ideal of family education proclaimed by Pestalozzi: "Education by the family, and in the family, by the mother." This was done without any loss of the spirit of the *Reden*, and the results of their inspiration were seen in 1870-1 when von Moltke was able to say that it was the schoolmaster who triumphed at Gravelotte.

The other and still more striking example is supplied by Japan. On the fourteenth day of the third month of the first year of Meiji (6th April, 1868), the Emperor took the memorable oath known as "The Imperial Oath of Five Articles." The term Meiji means "The Enlightened Government," and this oath appears to signify little short

of a step from feudalism directly into the forefront of occidental civilisation. The fifth article reads "Knowledge shall be sought throughout the world so that the welfare of the Empire may be promoted." This is the charter for the occidentalising of Japanese culture. So thoroughly was the plan carried out that in forty years Japan was able to meet on equal terms and to overcome one of the greatest military and naval powers of the West. Europe has not yet quite recovered from her surprise. Innumerable centuries of what we may not call barbarism but was certainly not what we would understand as progressive civilisation: then forty years of deliberate re-making by the nation itself: and the result that we still marvel at. Baron Dairoku Kikuchi has done a great deal to explain what took place,[1] but there is much that remains mysterious, and whets our curiosity in this remarkable phenomenon of national psychology.

As soon as we introduce the idea of a corporate consciousness we get into difficulties. It is generally recognised that consciousness is limited to the individual. There is no interpenetration of consciousnesses. Each individual consciousness is insulated from all others. We can communicate with one another but our consciousnesses cannot intermingle. Consciousness is as impenetrable as matter. It is true that we sometimes speak of the general consciousness or the common consciousness, but this is only a convenient mode of expression, and does not connote any real community of experience. The new psychology of the group is introducing a somewhat different conception, but after all does not challenge the old position. It is not suggested that the crowd has a soul of its own separate from the individual souls that make it up. It is true that some writers like Schäffle and Paul von Lilienfeld become over-figurative in the matter, and give occasion for critics to scoff. Max Nordau is savage with Lilienfeld:

[1] See his lectures delivered in the University of London, since (1909) published under the title of *Japanese Education*, especially the first 84 pp.

"He displays the bones, joints, muscles, tissue and nerves, the circulation, the limbs, and the internal organs that nourish the creature and determine its functions. . . . Von Lilienfeld has not enough imagination to go farther, and tell us whether his State is an organism of the male or female sex, whether it marries and has children or spends its life in unblessed solitude, and how its obsequies are celebrated when it dies."[1]

Some writers certainly carry their figures too far, but no sensible reader will feel called upon to treat the "organistic" method as implying the assumption that the state is a real animal, vertebrate or invertebrate. When dealing with such writers as Augustine and Comte it is rather silly of critics to ask for the exact location of the brain of the state or the seat of its soul. It is a reasonable thing to maintain that the state is an organism. It is quite sensible and intelligent to write as Sir Leslie Stephen does:

"A full realisation of this truth, which, is of course, a very old truth in substance, a perception that society is not a mere aggregate but an organic growth, that it forms a whole, the laws of whose growth can be studied apart from those of the individual atom, supplies the most characteristic postulate of modern speculation."[2]

Further, it is becoming clear that the newer collective psychology must be taken into account in this somewhat figurative but distinctly reasonable way of regarding corporate life. Psychology as hitherto studied has certainly confined itself to the individual, but there is no reason why it should not extend its borders. In point of fact it is no longer possible to confine our attention to the individual. The "social self" is now a recognised element in psychological study. No doubt the very phrases "individual

[1] *The Interpretation of History*, p. 100. Curiously enough such a sober writer as J. C. Bluntschli settles the question of the sex of the state: "Aehnlich verhält es sich mit der männlichen Eigenschaft des modernen States, welche erst im Gegensatze zu der weiblichen Kirche erkannt worden ist." *Allgemeine Staatslehre* (1875), vol. i. p. 23. In his *Darwinism and Politics*, D. G. Ritchie introduces the idea of sex in the evolution of institutions and customs, p. 26.

[2] *The Science of Ethics* (1882), p. 31.

self" and "social self" are misleading. Fundamentally they do not exist as separate entities, for every self is both; and man is an individual self in the degree in which he is a social self or comprehends and focuses the world. Yet there is a value in the distinction between the two aspects of the self, and as soon as we recognise the fact that the individual self is modified by the reactions of its fellows, we have rung the knell of purely individual psychology. It has to be frankly admitted that we do not at present know very much about collective psychology. Beyond a few generalisations regarding imitation, convention and contrariance, we have the whole subject to work up, but that it deserves working up there are few to deny.

Naturally this collective form of psychology is in its essence no new thing. In its ordinary figurative form it is to be found in Plato. It is implicit in Augustine, and is involved in all the socialistic and communistic writers. It is prominent in Hobbes, and becomes almost explicit in Rousseau when he discriminates between *la volonté de tous* and *la volonté générale.*

"There is often a deal of difference between the will of all and the general will. The latter looks only to the common interest, the former looks to private interest, and is only a sum of the particular wills; but remove from these same wills the most and the least which cancel each other, there remains as resultant (*pour somme des différences*) the general will."[1]

We have here clearly a beginning of that soul chemistry that forms the basis of the work of Bagehot and Tarde, and is being worked up in a general way by such writers as Mr. Graham Wallas and Professor E. A. Ross, and in its relation to the psychology of the individual by Mr. William Macdougall.[2]

[1] *Du Contrat Social,* bk. ii. chap. iii.

[2] Mr. Wallas's book, *Human Nature and Politics,* has been already referred to. The other two each published, within a month or so of each other, a book with the same title, *Social Psychology.* In spite of the identity in title the two works are quite dissimilar.

Collective Psychology is obviously of the first importance in education. Now that collective education is so universal throughout the world it is necessary that teachers should learn something of the laws of interaction among human beings. But in addition, in attempting to follow out the development of cosmic education, it is necessary to consider the educative effect of living in a society apart from any deliberate educational influence. For while education is usually regarded as being confined to the self-conscious stage to which Mr. Hobhouse refers, in a wider sense it must be admitted to include the cosmic stage as well, though at this earlier stage the purpose inherent in education must be sought outside of the educand and any possible individual human educator.

Those philosophers who regard the evolution of the world as the Development of the Idea may reasonably regard the whole process as educational. Among the attempts at a philosophy of history is one which regards the history of humanity as nothing more than a record of the education of humanity. To this it has been objected that it is absurd to regard what is happening now as the education of people who are not yet born. Thus Lotze writes:

"Education is only intelligible to us when a single individual is concerned; when it is one and the same person who becomes better, who bears the penalty of his mistakes and enjoys the fruit of his repentance; and who, if in the progress of development he has to sacrifice some good which he possessed, may yet keep the memory of it as something which he has himself enjoyed. It is not so clear how we are to imagine one course of education as applying to successive generations of men, allowing the later of these to partake of the fruits produced by the unrewarded efforts and often by the misery of those who went before."[1]

There is here a certain confusion between the subjective and the objective forms of education. It is quite possible that individual education may be going on satisfactorily, while there is also a cosmic education on foot outside of

[1] *Microcosmus*, bk. vii. chap. 2.

the individual's consciousness altogether. There may indeed be a great series of such educational processes going on, no one of which interferes with the others. There may be first the purely subjective kind in which the individual takes himself in hand and seeks to mould himself into a particular form. Then there is the more or less formal education to which this educand is being subjected at school. Next there is the general educative influence of the society in which the educand lives: this sometimes comes to self-consciousness as in the case of the statesman who deliberately sets about educating his party. Finally above everything else there may be a world spirit that correlates all the minor forms, and produces a general result of which the educand may or may not be dimly conscious.

The feeling of injustice expressed in Lotze's criticism is hardly well founded. It certainly seems unreasonable that we should have to suffer in order that succeeding generations may benefit, and if this were the whole case vicarious education could not but be regarded as unjust. But there is another side to the picture. The present generation does not begin the process. We not only suffer that our successors may benefit, but we enter into the benefits won by our fore-runners. We are not like him

> "Who journeying through the darkness bears a light
> Behind that profits not himself but makes
> His followers wise."[1]

We not only benefit by the light we win for ourselves, but we actually enter into the inheritance of the light of all the ages. The present generation are the life tenants of the earth. They enter into many gains won for them by the former tenants, and are expected to pass on the premises to the next tenants at least not worse than they found them. Such considerations as these seem to be necessary to reconcile us to the continuous calls to sacrifice

[1] Dante: *Purg.* Can. 22.

ourselves for the sake of those who are to follow us. But, as a more careful analysis of the conditions of the case will show us, there is no real sacrifice involved in the ordinary sense of that word. The good of future generations is not to be purchased at the price of disadvantage to the present. Only by doing what is really best for itself can one generation do what is really best for the next. A disquieting phenomenon here is the decreasing fecundity of highly educated peoples. It would almost appear as if the tree of knowledge were really poisonous, and that they who eat thereof shall surely die. But may it not be that decrease in quantity is balanced by increase in quality? The lower organisms produce an enormous number of individuals in order that there may be sufficient allowance for the merciless weeding out that characterises their stage. With the higher creatures the care of the offspring—rising finally to what is properly called education—removes the need for making so great an allowance for evil chances. It may be fairly argued that the care taken in the rearing of the offspring among highly educated peoples more than compensates for the greater abundance of poorly tended children of a lower grade. No doubt city life and overpressure do tend to weaken the stamina of a race, but this does not result from too much education, but from education of the wrong kind. What is called "race suicide" may result from an excess of selfish prudence, but not from an excess of education. In a highly civilised state man must take up the responsibilities that at an earlier stage may fairly be laid upon the nature of things. While we are at the merely cosmic stage, the wasteful method of trial and error is still permissible. But when man comes to take a share in directing his own development, the method must be changed. If no change is made, then we have the purely cosmic method working under conditions that demand conscious self-direction. Race suicide may be the evolutionary means by which is weeded out that human stock that does not rise to the level to which it is called.

We have seen that as soon as cosmic education passes

into human education we have the beginnings of theory. Man cannot take a hand in guiding his own development without forming some sort of view about his purposes and his methods, and this amounts to a rudimentary theory. In our next chapter we shall deal with theory so far as it is prehistoric, but at present we must consider how we are to treat the actual history of the various stages by which educational theory developed. Progress we are entitled to assume, but not unbroken progress such as might be represented by a straight line. There is certainly progress, and continuous progress on the whole, but it is marked by ebb and flow when we take a comprehensive view of world history. Roman educational theory is not necessarily higher than Greek, though it comes later in the world's history; and yet it may include certain elements of advance that are absent from the Greek period.

There are certain maximal points in the evolution of educational theory, each of which exemplifies on the whole a clear advance on the one that preceded, though it may well happen that in certain respects the earlier period reaches a level that has not been overtopped by anything that has followed. The student of educational theory, for example, is sometimes surprised and even annoyed at the frequency with which reference is made to Plato and Aristotle in all treatises that deal with his subject. There is a natural pedantry that leads writers in such a new branch of university study as education to support the dignity of their subject by appealing to the highly respected authorities of antiquity. But there is another and a more worthy explanation. The fifth century B.C. formed one of the two great educational maximal points of the past. Very many of our modern ideas on education are to be found implicit in Plato and Aristotle. In succeeding chapters abundant illustration of these anticipations will be found. It does not follow that these old writers were fully aware of all the implications of their own writings. No doubt we read into Plato and his fellows a great deal more than quite entered into their consciousness. This line of argument

always has the unpleasant effect of making us moderns appear condescending towards the master minds of the past; and we need to keep reminding ourselves that we see farther than the men of old merely because we are standing upon their shoulders. We must humbly acknowledge the lift they give us; but it is folly to blink the fact that we do see farther.

But not everybody thinks that Herbert Spencer marks an advance on Plato. This raises the important question: in what does educational progress consist? Was Dr. Johnson right after all when he maintained that all there is to be known about education was known long ago? It is a disquieting but necessary thing to ask point blank: Is our ordinary intelligent educator of to-day in possession of a better theory to enable him to carry on his life work than was his prototype among the contemporaries of Plato? A great deal depends on the view taken on the question of the progress of the world as a whole. Those who believe that the race has made no progress since Plato's time will certainly not admit any advance in educational method. But those who believe that the idea of evolution in its modern form has given a new point of view, that has profoundly modified our attitude to all matters involving life, will admit that we have got beyond the best that was available in the fifth century B.C. Even the men of the Renaissance had got ahead of Plato and Aristotle in the matter of the relation between the state and the individual. What is implicit in Aristotle becomes explicit at the Renaissance, thanks partly to Christianity and partly to the greater range of experience.

This question of educational progress is complicated by the fact that what is not an absolute advance may be a relative advance. Among theories as among animals the survival of the fittest may not mean the survival of the absolutely best, but merely of the one most fitted to survive under the prevailing conditions. Sometimes a mere change may mean an improvement in a particular case, because it meets special conditions. Even a change from

a good method to a worse may be an advantage to a state that is unfit to avail itself of the better method. Each age demands a new statement of educational theory, just as it demands a new translation of a great classical work. The real fundamental principles of education, like the substance of the book in its original tongue, remain unchanged, but each age needs a new presentation. It wants all the matters that affect it to be brought into direct relation with its particular form of civilisation, and not with some other, however superior that other may be intrinsically. Many of the steps that in the movement of educational theory may, therefore, imply no absolute advance, may yet serve to enable the whole body of educational doctrine to advance steadily. There is a great body of generally accepted truth that is the common possession of all thinkers on education, and has long been so. This body has been gradually built up, and each element as it has been added must have marked a real advance, however small, and every such advance has been ultimately added to the great body, and the advantage thus gained has become permanent. We have very few records of such upward movements, and there is considerable difference of opinion about the value of the various advances. The following examples may illustrate the point.

As far as available evidence can determine, it appears that Socrates discovered the value of the concept as an instrument of educative teaching. Naturally the concept was in use since ever man mastered the spoken word, and perhaps before. But Socrates made it for the first time an essential part of a system of teaching that was, and is, in the highest degree educational. It goes without saying that this particular improvement has been frequently lost sight of in educational theory ; yet it has remained with us as a permanent possession till this day. Another example may be found in the emphasis laid on the nature of the educand as compared with the emphasis laid on the matter to be studied. This advance is usually laid to the credit of Rousseau, and whether he made the discovery or not, he certainly popularised it, and a striking improvement in

educational theory was the immediate and permanent result. Perhaps in the future Herbart's conception of the *Gesinnungsunterricht* may be deemed worthy to be classed with the other two. In any case the recent developments of the quantitative method as applied to education marks, as a later chapter will attempt to show, the advent of a new mode of treating educational problems that cannot fail to have the most wide-reaching results.

The second great maximal period in educational thought is to be found at the Renaissance. If we keep in view the distinction between educational theory and educational practice, we find a remarkable difference between the period before and the period after the Renaissance. Were it not for the Platonic period and the faint reflection of the Greek views in one or two Latin writers, one might say that educational theory began with the Renaissance. If we take up any book on the history of education, we find that it naturally falls into three parts. There is first an account —usually a very meagre one, for our information on the subject is lamentably small—of education among the oriental nations: China, India, Egypt, Persia, Judea. Then comes a full account of Greek education, with a great deal about Plato and Aristotle, and a brief account of Latin education, with Quintilian in the foreground and Cicero and Seneca in the background. Finally, there comes the chief part of the book, taken up with the Renaissance and later writers. It is not, however, a mere matter of bulk. All the part that precedes the Renaissance, with the exception perhaps of the tiny section sometimes given to Scholasticism, is based on geographical distinctions—the education of this, that and the other nation. After the Renaissance, it is not usual to write specifically about French education, German education, Italian education, English education; but about this, that and the other theory of education as exemplified in this, that or the other writer or school of writers. Still omitting the remote Greek period, the generalisation may be ventured, with diffidence, that before the Renaissance the history of education presents us

with the educational practice, leaving us to make out the theory for ourselves, while after the Renaissance we are supplied with the theory, and have to make the application on our own account. In other words, we are tempted to maintain that educational theory came definitely to self-consciousness at the Renaissance. It is natural to expect that the theory of education should come to full fruition late in history, and had not the Greeks been such an exceptional people we might have had a very comfortable scheme of chronologically consecutive development of educational practice finally resulting in the burst of theory at the Renaissance. But as things are, the Greek period forms a useful warning against any attempt to work out a merely rectilineal development of educational theory from the earliest times to the Renaissance.

There are certain reasons for regarding the present as the third of the great maximal periods in the evolution of educational theory. The great development of national systems of education may be said to be an example rather of the evolution of education than of educational theory. But, in point of fact, these systems are based upon certain more or less clearly conceived theories of education. They are not the result of mere cosmic evolution. Deliberate human purpose is implied in their conception and realisation. Further, the enormous educational literature of the present day gives evidence of the widespread interest in educational theory. Never before were books on this subject produced in anything like the abundance that marks the beginning of the twentieth century. But it is not a mere matter of quantity. There is a striking change in the point of view. As will appear in a later chapter, we have reason to believe that education is now entering upon what may be claimed to be a strictly scientific stage, which is clearly marked off from all that has preceded it. The difference between the present stage and the Renaissance maximal period is probably greater than between the Renaissance period and the fifth century B.C. After all, the Renaissance period was marked by the rediscovery

of the classical ideals, from which it was separated by the dark ages, and these ideals could not but give colour to the newer theories. From the Renaissance till to-day there has been a steady advance, in which we have assimilated all that was valuable in the various theories. We had not to rediscover the educational gains of the Renaissance. Our present theory includes that of the second maximal period, with all that comes between, but contributes a new element in the scientific point of view from which it regards the whole field of education.

The various educational theories on which systems are founded do not succeed each other in a regular chronological order. Probably in the world at the present day examples could be found of practical applications of all the theories of education that have ever been promulgated. Further, if we were to take a longitudinal section of the history of educational theory from the earliest times to the present, we would find that most of the theories now current present themselves in various degrees of clearness at different periods. All are more or less implicit at the earliest stages, and make themselves explicit at various points throughout the history of the development. It is true that each of the theories is represented at its best by some one man or group of men, and thus may be said to culminate at a definite period. These periods may not unfairly be treated as the zeniths of the various theories. But before and after each zenith the theory in question is not without its representatives. At the present moment in the writing of the history of education each of the systems—Humanism, Realism, Naturalism and the rest—has its chronological place. It is treated by itself, the chief interest of the historian of education being apparently to demonstrate the justice of his choice of representatives of the particular system that is under discussion on any occasion. Montaigne, for example, has supplied a battleground for various taxonomists:

"Professor Laurie holds that he is a humanist; Mr. Quick that he is a realist; many other educational students classify him as a

naturalist. By some he is grouped with Rabelais, by others with Bacon and Comenius, by others with Locke, and yet by others with Rousseau."[1]

The writer from whom this is quoted is at pains to show that Montaigne is not a humanistic-realist, nor a sense-realist, nor a naturalist, but a new type that he names social-realist. Our interest at present is not in classification, but in the theories classified. It would be of small importance how Montaigne was classified, or whether he was classified at all, were it not that the difficulty of keeping him steadily in one class indicates a certain want of agreement among authorities with respect to the fundamentals of the various theories. Montaigne's case illustrates the undesirability of allowing systems to be arranged in a merely chronological order. If such an order were justifiable, then the *floruit* of an author would automatically settle his classification among educational theorists. It is true that more or less ingenious chronological correlations may be made. From its relation to the Renaissance Humanism is most easily anchored to a date. From the nature of the case Realism as a reaction must succeed Humanism. Naturalism as a reaction against both Realism and Humanism must follow both. The Disciplinary theory arises out of the wreckage of the attack of Naturalism on Humanism, and, therefore, has its chronological place fixed. The sociological, psychological, scientific and other aspects of educational theory may be arranged in a more or less rigid chronological order of development. But when the best has been done, serious objections may be raised to any rectilineal arrangement. Quite a good case could be made out to show that Naturalism preceded Humanism. Realism may be said to be practically coincident with Humanism, or in a very crude form to have preceded it. The sociological view that is sometimes placed in comparatively recent periods may be found exhibited in a specially striking if not altogether complete form in Plato. The principles underlying the different theories in fact are found to inter-

[1] Paul Monroe: *A Text-book in the History of Education*, p. 455.

penetrate among the various systems in the most puzzling way.

In dealing with the various educational theories there is also some danger of overlapping. Humanism and Naturalism have a certain amount in common, though they can be kept quite clearly apart in thought. But when we come to deal with what Mr. R. H. Quick [1] calls "trainers," we are in danger of a real cross-classification. For all educators claim to train their educands in some way or other. Accordingly "Training" cannot be adopted as a main heading, though the notion of training is probably the most fundamental in the whole scheme of educational theory. It is clear that each of the recognised theories lays stress on some particular aspect of education, and this emphasis has its importance. The best arrangement of the theories, therefore, will be that which takes account of the relation of the emphasised aspect to the whole body of educational theory.

In view of the prevailing conflict between classification and chronology, it will be well not to pay too much attention to the chronological element, and certainly not to adopt it as a guiding principle after the Renaissance. Instead of taking the period at which each of the post-Renaissance theories was at its height, and giving a cross section of educational thought at that time, the better plan will be to take up each of the theories, and show its relation to the development of educational theory as a whole. This implies a longitudinal section through the whole development of educational theory with reference to each of the theories taken up. The important thing after all is not which individual best championed a given theory, or at which period it attained its zenith, but the theory itself and its relations to other theories. This will always imply a to-and-fro movement in the discussion of any theory. Sometimes the range may have to extend as far back as the old Greek times, at others it may be confined entirely to modern periods. This book does not profess to be a history of educational theory, and makes no pretence of giving

[1] *Educational Reformers*, p. 422.

a chronological account of all the happenings that mark the process by which our present stage of educational theory has been reached. It is enough if it indicates the great lines of progress, and brings them into relation with each other. A discussion of the probabilities of the prehistoric period will be followed by a general account of the development of educational theory up to the dawn of the Renaissance. At this point begins to emerge the great problem of Formal Discipline as opposed to Specific education—probably, since it involves the whole question of training, the most important problem for professional educators. In order that Formal Discipline should have its proper background, a chapter on Specific Education will intervene between the general development of educational theory and the consideration of the place of knowledge as an educational organon. Humanism, Realism, Naturalism, Idealism, Materialism and Atomism will be treated in that order, and this will be followed by a general discussion of the present position of educational theory and its prospects.

CHAPTER IV

THE PREHISTORIC STAGE

The prehistoric stages of the development of the human race would seem to lie outside of all educational theory, since they may be expected to proceed quite apart from any deliberate intention of human beings. Still in the wider sense of education these organic stages must be included, since what is called, from the human standpoint, objective education is certainly in operation all the time. Man-making went on for long before man himself began to take a hand deliberately in the process. We want to learn a little about what took place during those eleven and a half hours of the Historian's protracted day. By the time that man bethought himself of his education, he found that there was a great deal of material ready to his hand. He was indeed half educated already. This result obviously implied preparation, a preparation that after all may be fairly called educational. This preparatory period may be for our purpose divided into two sections ; the first in which education was carried on mainly on the organic plane, the second in which man took a certain conscious share in the process, but did not theorise about it. Thereupon follows the stage of genuine educational theory.

It is natural that students of educational theory should turn to the period of cosmic education to see if anything can be learned there regarding the essential processes. The commonly accepted belief that the individual repeats in an abbreviated form in his development the stages through which the race to which he belongs has passed, gives rise

to the expectation that we may find writ large in the race the education that is best suited for the individual. This view is baldly stated in the first sentence of the preface to Lessing's curious little book, *The Education of the Human Race:*

"It is of some importance to understand rightly what principle really underlies the Divine Education of the Human Race, because we may be sure that such should be our rule in training and educating each individual member."

Even when we drop the idea of a purely personal educator as represented by Jehovah, there is something to be learned from the general parallelism between the race and the individual. Unfortunately for our present problem we get little help from race education, since the facts in the case of both the individual and the race are prehistoric, and therefore not available. The early stages of the individual life, though of course passed in consciousness, leave no record behind them, and thus correspond to the early stages of the race that have sent down no account to us. It is only when we have documentary or other permanent traces that this parallelism is of any avail.

Just as it is impossible to mark the precise period in the education of the individual at which he begins to take a deliberate share in the process, so it is not found possible to say exactly at what stage cosmic education developed into human education. No doubt man was educating himself throughout all the ages that preceded his awareness of that fact, but according to the definition of education we have adopted this process cannot be regarded as truly educational, since it was not carried on with the deliberate purpose of educating. In cosmic education we have agreed to regard the active agent in the bi-polar process as Nature, or whatever equivalent may be accepted for what is vaguely known as the world spirit. The important point is that there is no violent break in the process of education from the earliest times to the present. As with the race so with the individual. The becoming aware of the pro-

cess of education does not in any way imply a breach in that process; although the becoming aware of the self as a being to be educated is as clear and definite an event—albeit of much more importance—as the becoming aware of the existence of the platypus.

During the long ages of cosmic education man was acquiring a body of educational experience that finally came to fruition in the human education that succeeded on the event of his becoming aware of the process. During this cosmic period he was dimly conscious of both self and ends, of things to be done, the need of doing them, and of the being by and for whom they were to be done. These vague outstretchings towards future developments may perhaps not unfairly be regarded as educational instincts. At first sight it may seem unwarrantable to seek the origin of such an exceedingly complicated process as that of education among the primary instincts. But if it can be seriously debated whether religion is instinctive, there can be no great harm in asking whether education may not have its origin among the primary impulses of human nature. The enquiry is the less daring when we consider that there is a good deal to be said for the view that the whole theory of instincts is only a survival in a special form of the discredited faculty psychology. First innate ideas, then innate faculties have gone, and the way seems prepared for the exeunt of innate instincts. Accepting for the moment the orthodox views, we may find some help in an examination of the claims of education to rank among the primary impulses of human nature.

No doubt in its advanced form education has a greater need of an ideational basis than has religion, and is therefore more difficult to explain as originating on the instinctive plane. But what is wanted is a *beginning* of educational activity, the consciousness of the activity may be left to a later stage. It is true that this activity has a character or nature. It is not the activity of a gas jet, or of a sucking lamb's tail, but of a rational being—though reason at this stage is rudimentary enough. Many writers

would insist upon a colourless activity first, and then have it qualified by experience. But silk purses cannot be made out of sows' ears. Yet even if we are granted this specific activity, we have little hope of including education among the instincts if we accept the familiar definition of instinct as—

"The faculty of acting in such a way as to produce certain ends without foresight of the ends, and without previous education in the performance."[1]

For in terms of our definition education is here expressly excluded. But it is becoming customary to take a wider view of the scope of the instincts. It is true that Karl Groos tells us that "the idea of consciousness must be rigidly excluded from any definition of instinct which is to be of practical utility," and it is commonly assumed that instinctive action must necessarily be performed without any awareness of the end towards which it tends. It seems difficult, therefore, to include education among the instincts, since one of the essentials of the connotation of education is deliberate intention. Sometimes, indeed, we have instinct and education set over against one another, as things to be kept apart.

"Professor Lloyd Morgan claims that while the action of swallowing is instinctive, the actions antecedent to the swallowing are not instinctive, but are the result of imitation—of what we may call the 'traditions' of the race: *the mother hen habitually teaches the chick to dip its bill in the water.*"[2]

Here the word *teaches* may be taken as equivalent for our purpose to *educates* since it implies the element that is giving us trouble, deliberate purpose. The teaching hen is assumed to fill in the gaps left by instinct in the preparation of the chick to deal with its environment. But may not the teaching by the hen be as instinctive as the swallowing of the chick? She may or may not be aware of the end she has in view in directing the activities of the

[1] W. James: *Principles of Psychology*, vol. ii, p. 383.

[2] H. R. Marshall: *Instinct and Reason*, p. 231 (italics mine).

chick, but she certainly does her directing naturally and inevitably.[1] In the case of human beings, actions commonly regarded as instinctive are performed with a full consciousness of both process and end. When Darwin at the Reptile House at the Zoological Gardens withdrew his face from the glass when the cobra struck at him, he acted instinctively, though he was perfectly conscious of what he did, and even why he could not help doing as he did. It has been remarked that a dog may instinctively point without being aware of what it all means, but that by and by he may quite well know what to expect as the result of his pointing, without that pointing ceasing to be instinctive. He may be conscious of both process and end. It is quite conceivable that man began his work as educator in the same way that the dog begins his pointing, and that by and by he rose to the understanding of what education really implies. If this view can be accepted, the difficulty of passing from the cosmic stage to the self-conscious stage may be overcome.

Naturally a great deal depends on the view adopted of the nature of the instincts. We cannot do better than accept Mr. Macdougall's definition:

> "We may then define instinct as an inherited or innate psychophysical disposition which determines its possessor to perceive and pay attention to objects of a certain class, to experience an emotional excitement of a particular quality upon perceiving such an object, and to act in regard to it in a particular manner, or, at least, to experience an impulse to such action." [2]

Among the seven primary instincts on which Mr. Macdougall bases his Social Psychology is found the Parental

[1] In illustration of the teaching done by animals G. Tarde in his *Les Lois de l'Imitation*, p. 4, quotes from Espinas in connection with the perfecting of the instincts of birds, "une invention partielle transmise ensuite de génération en génération par l'enseignement direct." Further, Ch. Letourneau devotes the whole of the first chapter in his *L'Évolution de l'Éducation* to *L'Éducation dans le Règne Animal*, and supplies many very striking examples.

[2] *Social Psychology*, p. 29.

Instinct, with its corresponding Tender Emotion. Within the scope of this instinct may be not unfairly read an educational tendency, particularly on the maternal side though not absent from the paternal. The tendency to *teach* may not be instinctive in human beings,[1] but the tendency to cherish, nurture and make the most of their young may fairly claim to rank with the instincts, even though the parents may come to be perfectly conscious of all that is implied in education. The fact that at later stages parents commit the formal education of their young to professional educators supplies only another of those modifications of instincts that are characteristic of a relatively high stage of civilisation. In the case of certain of the instincts there is a complete disappearance when they have served their purpose. Others survive because they serve a useful end even in a stage of high civilisation, but naturally under these circumstances the original instinct has to undergo modification in order to meet changed conditions. Of these, education may well be one. The modern parent does a certain amount of education without realising at the time that it is education, a certain amount more that he does deliberately, and a third amount that he does by proxy.

In studying the very beginnings of cosmic education it does not greatly concern us how anthropologists answer the question whether men were originally solitary or gregarious, for they were being educated by the force of circumstances in any case. If we are to accept the brilliant speculations of Walter Bagehot in his *Physics and Politics*, the course of development falls naturally into two stages. During the first stage humanity slowly and painfully acquired the power of submitting itself to the crudest form of law. Nature saw to it that only peoples who could acquire a minimum amount of submission to a common law should survive, and that those who proved most

[1] Though perhaps even here a fair case might be made out when we remember what most of us suffer at the hands of those ordinary members of society who persist in instructing us long after the school age.

amenable to law should have the preference. The second stage required just the opposite quality in order to secure progress. Pure law-abidingness at this higher stage prevented the possibilities of further progress, and we have all the well known examples of arrested development. Now at both stages there must have been a rather energetic application of educational principles.

Bagehot clearly indicates that the education among those prehistoric peoples was of a very rigid kind. Naturally it was not deliberate or based upon any general principle. It was merely a licking into shape, a maintaining of the *status quo*, a stamping out of eccentricities. Human beings cannot live together without educating each other. The same forces that are at work to-day in society moulding the individual without society being aware of it, were in force in the earliest society that ever came together. It is true that there are additions to the educational scheme in these latter days, but the essentials were there from the first. Whatever may have been the raw material of society, there must always have been two forces at work, the one integrating, the other differentiating. By the interaction of these, society was kept alive, and progress became possible. The integrating work was done mainly by imitation, which is certainly one of the deepest-seated instincts in human nature. So fundamental does this force appear to Monsieur G. Tarde, who has followed in Bagehot's footsteps, that he makes it the basis of his definition of the social group.

"A collection of beings in so far as they are in the way of imitating each other among themselves, or in so far as, without actually imitating each other, they resemble each other, and their common features are ancient copies of one and the same model."[1]

In the light of this definition we must be prepared to find a great uniformity among the members of any society that has been in existence for a number of years. Tarde himself does not hesitate to give the following description

[1] *Les Lois de l'Imitation*, p. 73.

of the homogeneity of the stuff out of which society is built up:

"A number of children brought up together, educated in common amid the same surroundings, and not yet differentiated into classes and into professions, that is the raw material of society."[1]

On the other hand he tells us that we are not born alike, but become alike by the process of living, in other words by the application of his favourite law. Still it has to be remembered that on the purely physical side, as determined by inspection, babies are more like one another than are old men and women.[2] In this respect we are born nearly alike and spend our lives in becoming different from each other. From the point of view of social development the orthodox view may be said to be that we are born indifferent and are gradually worked up by imitation and other forces into the sort of person that can be at home in the society into which we are born. If this were all, there would be little room for differentiation. The continued application of imitation would reduce us all to a common level: we would have nothing but a dead level of uniformity. There is need of some means of manipulating the force of imitation.

First we have to discover what possibilities there are in the course of ordinary life for the introduction of changes in the models that imitation postulates. If we simply imitate one another all round there will be indeed a vicious circle, and education will consist merely in submitting ourselves to our environment, in the complete assurance that we cannot fail to imitate our way into every thing that is necessary. Experience shows, however, that changes do occur, and that, with a change in model, imitation can work quite as effectively in differentiating as in integrating.

[1] *Les Lois de l'Imitation*, p. 77.

[2] Cf. an instructive passage on p. 63 of Lord Avebury's *Origin and Metamorphoses of Insects*.

To begin with, the physical conditions of life lead to segregation. The geographical limitations of rivers, mountains and seas naturally split up societies into sections that are variously named clans, tribes, nations. Within these social units imitation is allowed free course, and this leads to uniformity in language, laws, customs. Such a case may be said to exemplify an imitation area. Within it there may be smaller imitation areas marked off by the social and industrial conditions. But these smaller areas have all only a small range within which imitation acts on different elements than in the case of the great body of the wider area. Now if any changes are introduced into the wider area they will be rapidly adopted by all and in this way there will gradually arise considerable differences between this area and those from which it is separated. At the earliest stages there is only a limited range within which change is permissible. It is well-known that savages do not allow change in a great many trifles that somehow or other have acquired importance in their eyes. Any change, accordingly, must be sought for among elements that have not chanced to be selected as significant. Mere accident may give rise to a change if it does not happen to interfere with any superstition that may chance to exist. A man may by pure inadvertence do some ordinary thing in a way slightly out of the common. If the innovation is not *nefas* it has its chance of being imitated. This chance is of course increased if the new way is, as sometimes happens to be discovered by mere chance, somewhat more efficient ; although it has to be remembered that mere efficiency is no justification of an innovation that interferes with established ritual. Language may be changed by imitation of the personal qualities of some individual who has acquired social prestige. A burr or a lisp may in this way spread through a whole area, and at later stages the peculiar forms of expression that may occur to some person of distinction will have the chance of being imitated and becoming general.

Admitting then the possibility of change within the area,

it will be readily seen that all such changes will tend to separate off more completely those who belong to this imitation area from those belonging to another. When areas came into competition with one another, as was inevitable, and when one of them was wiped out, as must have frequently been the case, naturally almost the whole of the acquired differences of the conquered group would disappear, as indeed they might with no loss to general progress, for they would consist mainly of peculiarities having no significance. But out of each annihilated imitation area there might be saved one or two elements worthy of adoption by the conquering group. No doubt imitation of an inferior by a superior is not so powerful as imitation in the other direction, but there never was a conquered race made slaves without the masters being affected, and we may infer that this occurred in the prehistoric times and formed one of the effective methods of race education.

Hitherto we have been dealing with imitation on the purely evolutionary level, that is as a force in the hands of a power outside of the society in which it is applied, but a force not deliberately used by the members of the society themselves. By and by society becomes more or less vaguely aware of the meaning and importance of imitation. It begins to take an interest in the process and to cast about for means to utilise it for its own ends. When society becomes conscious of imitation we have the appearance of what is called *convention*. Professor E. A. Ross is quite clear in his own mind that conventionality implies a consciousness of its own processes. Here is his definition:

"By 'conventionality' is meant a psychic plane resulting from the deliberate, non-competitive, non-rational imitation of contemporaries."[1]

The important word here is "deliberate." When we speak of *convention* we usually imply at least the notion

[1] *Social Psychology*, p. 110.

of an agreement with regard to certain modes of thought or action. There are of course varying degrees of awareness of the fact that there is the agreement, but its presence is usually recognised as soon as the question is raised at all. Convention may in fact be not unfairly regarded as the recognition and approval by society of the results of imitation. It is not suggested that at the earlier stages any connection is recognised between imitation as such and convention. Imitation makes a certain mode of action common. Convention is the sanction that society gives to the common form of activity thus established. At later stages convention is usually regarded as the essentially conservative principle that steadies society on the one hand and is therefore wholesome, but that stifles initiative on the other, and is therefore pernicious. Convention is the force by means of which society clinches the work of imitation, so far as the imitation is diffused; but when it comes to new centres of imitation convention acts in opposition. So long as we are all imitating each other and thus maintaining the uniformity of society as a whole, convention is all for imitation. But so soon as any new form of activity is introduced, and invites imitation, convention, to begin with, will none of it.

The need for the steadying influence of convention is seen when we consider the essentially blind force of imitation as an organic process. For at the earlier stages it always works positively. Contrariance and all the peculiar phenomena that accompany it come at a later stage after self-consciousness has been introduced. So imperious is the power of imitation at this early stage that the French psychologists have felt compelled to invent a name for it, and have hit upon the term *moutonisme*. The only way to oppose the power of *moutonisme* with regard to a particular model is to substitute another and a more attractive one. Convention is the force that helps to control *moutonisme*. It supplies the bell wethers that direct the flocks. The beginnings of deliberate education are to be sought in the workings of convention.

One of the most common charges against the present day schoolmasters and schoolmistresses is that they are excessively conventional, and some writers spend a good deal of time in girding at the dullness of teachers. But it is a dullness that is superimposed by the conditions of the case. Society demands that those to whom it commits the young should be safe, and masters who did the sort of things that some writers would like to see them doing, would never be entrusted with a school. Society insists that the teacher shall be conventional. There is a vague general impression that somehow education is to lead in the matter of social progress, but in an organic process nothing leads, all is interaction. We have the popular view well put in the following:

"Education ought to prepare and direct the progress and perfection of minds; in reality it follows it, reflects it, propagates it."[1]

Kant hits the mark when he says that in this matter we are in a circle from which we cannot escape, for illumination depends on education, and education in its turn depends on illumination. He makes an attempt to stir teachers at any rate to understand their place in this circle, for in the Introduction to his *Thoughts on Education* occurs this passage:

"Children ought to be educated not for the present, but for a possibly improved condition of man in the future, that is, in a manner which is adapted to the *idea of humanity* and the whole destiny of man.... Parents usually educate their children merely in such a manner that, however bad the world may be, they may adapt themselves to its present conditions. But they ought to give them an education so much better than this, that a better condition of things may thereby be brought about in the future."

This is the philosophy of the thrifty mother who has her growing boy's clothes made a couple of sizes too large, in order that he may gradually fill them. But Nature is not thrifty in this way. She insists on creatures fitting into

[1] L. Dugas: *Le Problème de l'Éducation*, p. 337.

their environment at once, or making room for those who can. Convention played in those prehistoric times in all probability precisely the same rôle as it plays in education to-day. It may be said without an excessive straining of the facts that imitation did the positive work and convention the negative. Imitation supplied the "thou shalt," and convention the "thou shalt not." No doubt convention constrains us to do certain things, but its main force is centred on things to be avoided. Convention demands no high attainment in any department: what it is inexorable in exacting is conformity to a standard, and above all avoiding any breach of definite rule. In social heredity imitation represents variation, while convention stands for continual reversion to type.

After the purely organic period when nature did her work of education without the stir of mankind at all, there must have intervened a long period during which education was carried on, not quite unconsciously, it is true, but without any specific theory on the matter, and indeed without any reference to anything but the immediate needs of life. It is not to be supposed that men did not know what they were about in moulding their young into the forms that they desired, but merely that education was not set apart as a separate element in the work of life. The young grew up and were gradually licked into shape, without any special attention being paid to the process. They were moulded into the form that society wished them to assume, without society's taking any special precautions to secure the result desired. The young were educated by the process of actually living. By the time that educational theory begins to form, it finds the nature of the educand moulded in certain very definite directions as the result of the interaction of the various forces of nature and in particular of those two forces, imitation and convention. The stable elements in human character are thus built up. Nor must educational theorists complain that this part of the work has been done before they have been allowed to operate. The action and reaction between imitation

and convention throughout the ages that preceded the appearance of theory on the subject consolidated human nature into a homogeneous whole upon which theory may work with some chance of success. All the universal elements in man have been strengthened and organised in him by the secular action of these impersonal forces.

As soon as deliberate education begins, however, the forces of imitation and convention must be taken in hand. It is felt, for example, that both these forces have an adverse influence upon free development of the individuality of the educand. Originality is rendered impossible if they are to have unrestricted play. Progress seems hopeless unless we can break away from their power. This is very true, and there is room for much skill in regulating the application of the two dangerous forces. But it must not be forgotten that they have their function even in a highly cultivated society. They supply the conservative element that is necessary to maintain a steady advance. In our cry for initiative and the free play of the individuality of the educand, we must not forget that all these things depend upon imitation and convention having previously done their perfect work. There is only a one-sided statement of a valuable educational principle in Mrs. Shelley's cry:

"Teach him to think for himself? Oh, my God! Teach him rather to think like other people."[1]

We have here a striking expression of the need of stability before even genius can do its best work. The margin left free for originality in life is very narrow, and the source of even this limited degree of originality is in dispute. In dealing with the possibility of change within the old imitation areas no reference was made to

[1] "Mrs. Shelley was choosing a school for her son, and asked the advice of this lady who gave for advice—to use her own words to me —'Just the sort of banality, you know, one does come out with: Oh, send him somewhere where they will teach him how to think for himself' . . . Mrs. Shelley answered . . ." (as in the text). M. Arnold, *Essays in Criticism*, second series, p. 206. Quoted by Dr. Hayward: *The Meaning of Education*, p. 11.

the influence of actual invention. We were safer to calculate mainly on chance and natural reaction, for the status of the genius in those old times was very precarious. But, however badly he may have been treated because of the claims of tradition and superstition, he did occur, and ultimately exercised a great influence. His genesis has given rise to two theories. The one view is that the genius is the outcome of his age. He interprets and expresses the true inwardness of the society which produces him. He is the spirit of the age made articulate. The other theory is that the genius is an unexpected and unaccountable phenomenon, who expresses himself, and by the force of his genius this expression so influences his fellows that they imitate him. The genius leads the way and the force of imitation sees to it that he has many followers.

We have here two opposing theories to account for a recognised fact. No one denies that in society we have schools and sects and cliques: that originality is rare, and imitation universal. The more recent view is that we all follow the great man. He sets the fashion and the others play the sedulous ape. This theory certainly explains the observed phenomena: but the explanation involves the begging of the great man. Him it does not explain. He is a *lusus naturae*. On the other hand the older theory accounts for the genius as well as for the effect he has upon his contemporaries. By general and only slowly developing assent certain activities are regarded with favour by society. The inherent tendency to imitation makes it easy for these activities to extend their scope, while the disfavour accorded to other activities by convention renders them unable to compete with those adopted by the majority. Those who can best carry on the activities thus favoured win precedence over their fellows. He who thus is the best follower passes for a leader in a society that would in any case be doing the sort of thing that he does supremely well. This may be said to be what underlies the statement that a great man is the crea-

tion of the age. Very frequently there is but a small difference between the genius and the man of talent, but on the other hand the genius differs so much sometimes from the general type that he is disqualified for the part he ought to play, and becomes waste product. The small partition that divides the great wit from madness is broken down when he has not enough of the common elements of humanity to ballast his store of new points of view.

The two theories are not irreconcilable. In the case of the really great genius, the man who is generally recognised to be a portent, it takes both theories to account for all the facts; the one to deal with his nature, the other to explain his influence. With the less startling geniuses the spirit of the age will probably be a sufficient explanation.

At all times the limits within which originality is welcomed by society are very narrow. We must not be misled by the clamour for "initiative" that is so characteristic of the present day. What this outcry demands is not originality in the sense of evolving entirely new ideas, but skill in manipulating ideas that are common property. The educand is to be so trained as to be prepared to meet not absolutely new cases, but to meet each kind of occurrence with the appropriate reaction. His activities have to be so organised that they shall function in an easy way, with the power of accommodating themselves to changing conditions. Education can do much in securing the power of accommodation, though it can do practically nothing towards the cultivating of genius, beyond giving it the best opportunity of developing and exercising itself. Be it noted that education has this power, though, through unintelligent theory, it has usually been exercised against genius. There seems to be nothing so difficult for a teacher to acquire as the art of letting a clever pupil be clever in his own way. The cry of genius throughout the ages has been against the schoolmaster. Most of the geniuses envy Blake that the nature of his educational career was such that he could afterwards write with truth the doggerel:

> Thank God, I never was sent to school,
> To be flogged into following the style of a fool.

The schoolmaster on his part is not slow to take up the challenge. He has no place for geniuses in his scheme. "Pas de génie!" cried Jacotot, and the ordinary schoolmaster adds a hearty *Amen!*[1]

At the earliest stages, then, the two forces of imitation and convention would almost automatically secure the education of men. But by and by these forces would be manipulated by the quicker intelligences in the tribe. The instinctive disapproval of anything differing from the ordinary customs could be intensified by emphasising the orthodox forms and calling special attention to deviations; and the institution of appropriate punishment for breaches would act in the same direction. It is difficult to believe that the abler members of a tribe would not give their mind to inventing methods of improving the skill and physique of their fellows in order to strengthen the power of the tribe as a whole.

By and by the suggestions made by particularly distinguished members of the tribe would be justified by some signal success, would be ratified by tradition, and

[1] The instinct of the schoolmaster finds a supporter in no less distinguished a writer than M. Ribot, who tells us that education is never absolute but is efficacious only in average natures. If we have all the grades of human intelligence arranged in a regular series from the idiot to the genius it is maintained that at the lowest stage education is impossible; and at the highest, though for a different reason, it is equally inefficacious. The nearer we are to the mean the greater the effectiveness of education. J. M. Guyau denies this generalisation so far as it concerns the upper reaches. He does not see "why the great natural qualities of genius should make it inaccessible to education. The more naturally intelligent one is, the more one is capable of learning, and of having one's intelligence developed by education. . . . I think, therefore, that genius simultaneously realises the maximum of abundantly fruitful *heredity* and *educability*." *Education and Heredity*, Eng. trans., p. 105. George Eliot seems to be on Guyau's side, since she makes Klesmer in *Daniel Deronda* (bk. iii. chap. xxiii.) say "Genius at first is little more than a great capacity for receiving discipline." W. C. Bagley makes an educational application of Klesmer's definition.

would leave a permanent impression on the mode of life of the tribe. With greater consolidation there would arise greater opportunities for deliberate modifications. But with the increasing complexity of life there would be greater prejudice against change, for change would then involve a greater degree of dislocation of the established order. We may be sure, then, that the would-be innovators went as indirectly about their work as possible, so as to attain their ends with the minimum amount of friction. Religion was of course called in to sanction many things good in themselves but not attractive to the people. Ancestor worship in China, and the caste system in India had certainly very important educational effects, though it would probably be rash to assert that they were educational in their origin, in the sense that they were deliberately invented by man with an educational purpose. The probability is that the educational possibilities of existing customs were seen at later stages and fully utilised. When we come to the Hebrew ceremonial we may be almost certain that it had a definitely educational origin, if we keep to a sufficiently wide meaning of the term. Generally speaking imitation and convention, with the sanction of religion, secured the required stability and enabled the leaders to modify customs for the good of the whole people.

It is almost certain that the necessary training of the young of the tribe or nation by mere force of the experience it gave, would inspire the adults with ideas of a general character with regard to education. It is quite clear that many of the initiation rites among savage tribes have an educational, as well as a religious, meaning. Not only are they meant to strengthen the will and encourage endurance, but sometimes the subsidiary conditions have a direct bearing on the acquiring of skill. When we find, for example, that during the probationary period the eating of certain game is prohibited, which game turns out to be the kind that is most easily caught,[1] we cannot exonerate

[1] Ch. Letourneau, *L'Évolution de l'Éducation*, p. 42.

the makers of the rule from a certain educational bias. One can quite well imagine the wise men of the tribe drawing up the list of animals to be included in this list for the close season, and giving reasons for and against the inclusion of some particular animal. Would not this discussion amount to a rudimentary treatment of educational theory? Unfortunately the Australian aborigines are about the last people in the world to accuse of harbouring theories, so we need not be at all surprised that they have left no record of their views on education.

From its very nature educational theory must come late in the development of civilisation, but with the more or less organised system of education that certainly existed in some of the empires that appeared towards the end of the prehistoric period, there must have been some sort of theory. That there is no record of it need not astonish us, when we note that there is hardly any record of the educational systems of even those empires that do come within the range of the historical period. It is not greatly surprising that there is no record of a developed educational theory in those old historical empires though they certainly had an educational system, in fact two systems. There must have been one system for the training of the young members of the ruling class, and another for welding into serviceable shape the great mass of humanity made up of the lower orders of the empire itself, and the conquered nations that were continually being added.

There are two reasons why no record of educational theory has reached us from those ancient times. In the first place knowledge of this kind would be in the hands of the priests, and would certainly be regarded as part of the esoteric learning of the time. So far from any attempt being made to promulgate this knowledge it would no doubt be jealously guarded, and passed on from generation to generation with all due form and secrecy. There can be no doubt that the priests studied human nature very carefully for their own ends. It is sometimes maintained indeed that they attained to a very much deeper knowledge

of the human mind than is at the present day available. In the absence of evidence it is perhaps only respectful to suspend judgment, though it is not likely that psychology in the ordinary sense of that term to-day was ever considered by those old priests. On the other hand, since we are all psychologists more or less, there is nothing inherently improbable in those old priests having evolved a highly developed but strictly utilitarian science of human nature and motives. Those who would be real masters of men must study men, and there can be little doubt that the old priests aimed at mastery. Their ends were not necessarily bad; on the contrary it is probable that the priestly class did most of the work that led to the spread of civilisation. But the priests certainly included among their ends the complete subjection of the people. They were willing that good should be done, but it was to be done through the priesthood. If we are to believe the representations of the French materialist philosophers of the Enlightenment there is nothing beyond the diabolical ingenuity of those old historic and prehistoric priests.[1] Making all due allowance for the magnification of prejudice these priests cannot be supposed in the course of their

[1] "Holbach with his cunning priests, introduced a new kind of mythological beings." Harald Höffding, *History of Modern Philosophy*, vol. i. p. 484. Quite as severe as d'Holbach's verdict is that of the modern anthropologist Letourneau. On page 562 of his *L'Évolution de l'Éducation* he admits that "les prêtres primitifs . . . avaient eu le loisir de se former un certain bagage intellectuel." But "cette mainmise du clergé sur l'éducation a lourdement pesé sur le développement ultérieur de la civilisation générale. Quand les prêtres, organisés en caste ou en classe, ne se contentèrent plus d'être les truchements autorisés des puissances invisibles, mais furent devenus les dépositaires attitrés de tout ce que l'on possédait de science, ils adultérèrent le savoir laïque en le mariant étroitement à la mythologie. Or par essence même, les croyances religieuses prétendent à l'immobilité; elles tiennent à être des dogmes supérieurs à tout examen, et, en s'alliant trop intimement avec elles, la science laïque tend fatalement à se cristalliser; tout changement, par suite tout progrès, lui deviennent interdit. Partout l'enseignement donné par des prêtres est autoritaire, et toujours il s'adresse surtout à la mémoire machinale; on le doit recevoir et retenir sans examen ni discussion, comme un ordre d'en haut."

studies in human nature to have omitted a practical consideration of the best methods of controlling the young, and modifying their character in such a way as to be to the future advancement of the priestly class. Naturally human nature would be studied in the greatest detail in connection with those born to high estate. It would well repay the priests to spend a great deal of time in mastering the intricacies of minds that were in the future to be of such fundamental importance in the state. On the other hand, as statesmen, the priests would feel the need of understanding the nature of the subject races. But this time they would study human nature in the mass. It would be remarkable if this double study under the impulse of a very definite and strong motive did not result in some body of educational principles to be passed on from generation to generation of priests. It may be objected by unsympathetic critics that these principles could not have been of very much value since even in our days, when everybody is eager to proclaim all he knows about education, there is still so little known that is of much consequence. Why then should the storehouse of educational knowledge be regarded as of such importance in those old days?

It has to be remembered that one of the great modern discoveries in the matter of education is that it has no arcana. There are no royal roads to education. This was known to some of the wise in the old historical times, but it is not fully recognised even at the present day, and was certainly not likely to be generally known in those dim old prehistoric times. It was probably thought that there were educational secrets of the greatest possible value. Why should it not be so? There was no criterion by which to compare one kind of knowledge with another, and on first principles what could have a greater claim to importance than a knowledge of men and motives. Even as late in the history of education as the time of Wolfgang Ratke (1571-1635) we have an example of a man who thought he had hit upon a system of education that was a

trade secret and was worth money. Indeed in our own day there are memory-mongers who claim to have a specific psychological knowledge that has a trade value, and is to be communicated only in consideration of a high fee and a legal agreement not to divulge the secret. During the period of "payment by results," teachers in elementary schools in England and Scotland hit upon various expedients for preparing pupils for examinations. If successful, such expedients were regarded as matters of commercial value, and were jealously guarded. Sometimes expedients were exchanged between schools that were so far apart that there could not be any rivalry between them; but anything approaching to publication would have ruined the value of the expedients. Their importance consisted in their being of strictly private application. Besides, the teachers were not proud of their cunning methods, and had no desire to give them publicity.

This last consideration introduces another reason why the results of the old studies in the management of men have not come down to us. We must not forget that any scraps of educational theory that have reached us from the past are concerned almost entirely with the nobler aspects of life. Yet there can be no doubt that a considerable part of the theory of education in the prehistoric times concerned itself with methods of procedure that would certainly not command public approval. There was no lack of worldly wisdom in those old days, but your worldly wise person does not proclaim his philosophy on the housetops. It is only as something of a portent that a Machiavelli publishes what he believes to be the proper way for a prince to deal with men, and it is at the least doubtful whether *Il Principe* contains all the author's mind on the subject. Chesterfield's letters to his son are particularly frank, but we can imagine a worldly father keeping still more worldly wise, if less reputable, advice for his son's private ear.

We have become so accustomed to the ceaseless promulgation of educational theories that we have almost lost the power to conceive of a time when such matters were held

to be worthy of preservation as trade or professional secrets. Further, we have become so accustomed to regard education from the point of view of the good of the educand, that we are apt to forget that there is another side. The comparison has never been worked out, so far as I am aware, between the education for good and the education for evil. It is possible that when carried to detail there may be just as much difficulty in making the worst out of the educand as in making the best. All the moral backslidings that distress the educator for good may be balanced by troublesome quickenings of conscience just when the educator for evil thinks the temptation complete. We may have all the alternating uncertainty of the argument in Bishop Blougram:

> "We called the chess-board white,—we call it black."

But general opinion will favour the view that education for evil is the easier. Whether we accept the doctrine of original sin—comforting to the anxious educator—or merely fall back upon our common experience, we feel that it is much harder to build up a good character than either to corrupt a character, or merely to use it as a neutral element for our own advantage. We can imagine unscrupulous educators—we need not make them priests—acquiring a fine art of utilising human nature, and since they had no feeling of responsibility regarding the effect of their manipulations on character, becoming very skilful in the process and very unwilling to let their secrets out of their own hands. It is difficult for us to put ourselves in the position of such an educator, but in all probability he would have a lingering sense perhaps not of shame but of awareness of the unpopularity his methods would be likely to produce if they were made public. He would have two reasons for not wishing them to be made known; because first, their publication would interfere with their efficiency; secondly, it would interfere with his comfort. Accordingly, he would keep them very private, and would probably hand them down by word of

mouth, perhaps in the form of verse, so that each successor would benefit by the experience of his predecessors. Those who study such matters[1] tell us that a peculiarly objectionable kind of lore is passed in this way from generation to generation with marvellous exactness, for centuries. Had the secrets of educational theory had the charm that this other matter possessed, it would no doubt have had its perpetuation too. But in view of the very moderate general interest in educational theory, we may cease to be surprised that the public has failed to make the effort necessary to keep it alive from the prehistoric time.

[1] For references see Stanley Hall's *Educational Problems*, vol. i. p. 392.

CHAPTER V

THE SOCIAL AND THE INDIVIDUAL AIM IN EDUCATION

At the early cosmic stage of education we are prepared to find the individual entirely subordinated to society, so far as he is an educand. In the formation of that "cake of custom" on which Bagehot lays such stress as an indispensable condition of the survival in prehistoric ages of any group of human beings, it is obvious that education must play a prominent part. No doubt in the case of adults any breach of custom would be drastically treated. But it would soon be discovered that the best way to secure conformity to standard is to begin with the young. In that early form of training that may be called the education of living, that moulding into shape that goes on in the mere course of life and quite apart from any deliberate intention of educating at all, the whole force of education is directed towards the fitting of the individual to take his proper place in his surroundings.

At any stage, however advanced or however rudimentary, education may be regarded as a process of adjustment to environment. Sometimes our attention is directed to the activity of the educand, sometimes to the effect of the forces of environment. But in all cases the process is recognised as one of interaction, and neither of the forces can be regarded as less or more than the other. At the earliest stages both the individual and the social forces work more or less unconsciously. There is no deliberate effort on the part of the individual to assert his individuality, nor on the

part of society to subordinate that individuality to public interests. Yet each tendency is vigorously at work all the time. By the mere fact of living in a society the individual is moulded to the needs of that society. There may be no systematic attempt to curb individuality, but the curbing necessarily goes on. No doubt the individual reacts upon society and does his best to modify it: to that extent the process of reaction between the individual and the state may be said to make up organic education. But the state seems to be conspicuously the senior partner. However independent the individual may feel himself to be, by far the greater part of his activities is carried on in such a way as to meet the approval of the society in which he lives, though this is only what is to be expected when we consider the organic relation between the state and the units that make it up.

Some modern writers get very pessimistic on the subject of the oppression of the individual by the state. They admit that the states of to-day do not set out as the old states sometimes did, to bring the individual into subjection, but they maintain that the working of natural laws seems to bring it about that the interests of the individual are necessarily subordinated to those of the state. The present always appears to be sacrificed to the interests of the future.

But this notion of subordination to the future is based on a misconception of the whole position. Every stage has its own worth, if it really does mean anything worth having in the future. The ideal is realised in every stage of its own attainment, though fully only in them all—not merely in the end. Hegel is very fond of insisting that the last stage is not the whole; in other words that the process itself counts, and is not merely annihilated. The whole course of evolution is a pressing on to some far distant goal, and the passing generations are only steps in its progress. Yet it may reasonably be maintained that each generation furthers best the general evolution when it best fulfils its own functions. Only by making the best

of the present as present, can we do the best for the future. Only in so far as sacrifice is for the present good is it for the benefit of posterity. There are those who question this position. But whatever may be true about the sacrificing of the present to the future in the case of life in general, there would appear to be no doubt that in education this has been consistently done—and this sacrifice has been both deliberate and voluntary on the part at least of the educators.

It seems of the very essence of education that it should involve a present sacrifice. It would appear that whatever rewards are looked for must be sought in the future, if they are to be found at all. Society is recommended to look to the good of posterity in order to get present comfort in the self-denying work of education. We are told that the young form the connecting link between two generations, and make a bridge by which one generation links itself on to the next. The ego of the parent extends itself so as to include the egos of the children, and this extended egoism stretches inevitably into the future. The parent lives again in the children, and has therefore a part and lot in the future. Education of the young becomes an almost inevitable reaction to stimulus, and we have seen, indeed, that there is some justification in regarding it as instinctive.

But is all this justification of education necessary? How could we spend time better than in passing on to our successors the accumulated gains of the present generation and the past. We find that the highest ideal of life is self-realisation. The above argument implies that self-sacrifice is the negation of self-realisation. As a matter of fact they mutually need each other to make an intelligible whole. Either apart from the other is a mere abstraction, and is bad. We do not have to choose between self-sacrifice and self-realisation, nor are we driven to practise them alternately. We sacrifice *in* realising, and we realise our highest self in sacrifice. Hence the ego of the parent is not really selfish, and does not need to be sacrificed

at all, but only to be realised. The positive takes in the negative.

Yet we do not thus get rid of at least the appearance of conflict within the state. Even in the education of a child in a family there is a certain amount of divided interest. The parents may wish him to turn out to be a particular kind of person, in order that he may bring them advantage either economic or aesthetic. The child may have quite other views. No doubt in a case like this the extended egoism of the parent includes the individual well-being of the child, and there is a fair chance that the child may be treated as an end in himself. But in the case of society in general, where extended egoism has a limited range, there appears to be danger that the individual will be educated directly in the interests of the state. When we view the matter from the overclose standpoint of individual experience, there appears to be an ever-present antagonism between the claims of the individual and those of the state. Mr. Benjamin Kidd gives us a very emphatic statement of this inherent antagonism:

> "The interests of the social organism and those of the individuals comprising it at any particular time are actually antagonistic; they can never be reconciled; they are inherently and essentially irreconcilable."[1]

Here we must regard the qualifying phrase "at any particular time" as applying both to the antagonism and to the reconciliation. It may be that the conflicting interests at a given moment are inherently and essentially irreconcilable—for that moment. But in a wider sweep it must be possible to reach a reconciliation. For, after all, this opposition of the interests of the individual and of society is only one of the many cases in which we find forces acting against each other, in order to produce a result that is favourable to the interests that lie behind both. The opposition is only a beat in the rhythm of progress. The individual can make the best of himself only in a

[1] *Social Evolution*, p. 85.

state ; the state can come to its highest development only on the condition that each of the citizens realises the best that is in him. The very limitations the state places on the individual are means by which the individual realises himself.

This theory of the essential and irreconcilable opposition between the individual and the state is based on the atomistic view. It assumes that the individuals have not only an independent existence but an independent nature. Yet reflection shows us that the human individual has no meaning apart from a society. Man by his very nature is not self-sufficing[1] and accordingly must live in a state. But this does not mean that man discovers his lack of self-sufficiency, and then sets about forming a state. When Socrates tells Adeimantus that in state-making "the true creator is necessity, who is the mother of our invention" we might think that he meant that men after they had found out their need of mutual help said among themselves, "Go to, let us found a state that shall make us corporately self-sufficing." But he is careful to limit his invitation, for when he addresses Adeimantus he says: "Let us begin and create *in idea* a State." It is only in idea that man has at any time been called upon to create a state though he has frequently had to organise a new form of state. If ever there was a "cyclopic period"[2] it marked a time at which man was still in the making, and had not yet reached the human standard. It was not that in the evolutionary process man first reached the full standard of humanity, and then proceeded to find his lack of self-sufficiency and to make provision for his defects by founding a state. The formation of society was part of the formation of humanity. We can think of the individual and the state separately, but this is only an ordinary case of abstraction. We cannot think of the human individual as a complete independent unit. An essential part of his

[1] αὐτάρκης, *Republic*, bk. ii. § 369.

[2] Walter Bagehot's term for the time when men lived like the cyclops as solitaries.

very nature is his relation to his fellows in a society. In the case of a hermit we do not get rid of the social relation, we merely confine ourselves to its negative aspect. The term *hermit* in fact rather emphasises the social aspect by calling special attention to its negation.

But within the state there is necessarily action and reaction going on, and this frequently takes the form of an undeniable struggle. We have in fact within society the same sort of struggle between the individual and his social surroundings that we find in the natural world between him and his physical surroundings. In the process of development man and physical nature are in a state of perennial conflict, so we need not be surprised to find a similar condition of affairs in the social environment. The individual and the state are both organisms, each working out its own development according to the laws of its own nature, laws that in their turn form part of the organic universe in which both are developing. It is when we look at matters from too close a standpoint that there seems to be an irreconcilable antagonism between the individual and the state: their interests seem to clash at almost all points. According as they emphasise the claims of the citizen or of the state writers fall into two opposing camps as individualists or socialists.

Before education reached the self-conscious stage that is necessary for the origin of theory, both the individualistic and the socialistic forces were in full activity. The parent would naturally do all he could then, as he does all he can to-day, to get a little extra advantage for his children by means of education. Public feeling and social practice would at the same time exert all their influence in making the educand a useful member of society, as society at the time understood usefulness. It is most probable that a great deal of the beginnings of theory that have either never found their way into documentary form, or that have not survived in that form, were predominantly individualistic in aim, but socialistic in effect. For personal aggrandisement men would seek to make of suitable

individuals a particular kind of citizen, not because of the advantage to the state, but of the advantage that would accrue, in some form or other, to whoever took the trouble to educate them. No doubt some advantage would also come to the educands, but this would not occupy a prominent place in the considerations of the educator. On the other hand, when there arose any questions of theory, there is no doubt that the good of the community would be brought to the front. The individual would be regarded as more or less an instrument for the use of the state. The offspring of rulers and princes would no doubt be trained up to be efficient successors to their parents, and that without any regard to the good of the state. In such cases the state would be regarded as the possession of the ruling family, and the good of the state treated only from the point of view of the good of the family. The state was treated very much as an estate might be treated during the feudal times. When it was a matter of educating the people, on the other hand, the good of the state was the only point seriously considered.

But while civilisation is built up on the general principle of the complete subordination of the individual to the state, there is always present a certain tendency to reaction on the part of at least some of the members of the state. The self-assertion that is inherent in humanity obtains its first satisfaction in conflict with other individuals as individuals. At this stage there need be no theory involved. It may all be a matter of direct interaction among individuals, without any thought of wider issues. By and by, however, when the spirit of independence is carried to the length of questioning the authority of society in general, we must have at least the beginnings of theory. The individual has the feeling that he is opposing something impalpable though powerful, and with the awareness of the existence of social pressure there must come questionings regarding its nature and the source of its power. In the claim for the rights of the individual there is implied a state of affairs that does not exist at the time the claim

is made, and this necessarily implies theory. In point of fact the first appearance of educational theory consists mainly in a discussion of this very matter of the relation between the state and the individual.

The earliest recorded systematic discussion of educational theory dates from the fifth century B.C. But the discussion among the educators of this period that we find recorded, is so advanced in thought and so finished in form that it necessarily implies much previous though unrecorded consideration of these matters. This view is strengthened when we find that at the time in question there was a certain agreement about theory, though there was a good deal of discrepancy between theory and practice. There were in fact in the Sparta and the Athens of the time two distinct types of education, and yet in theory both cities acknowledged the supremacy of the state in education as in all else. In Sparta the state actually did undertake the administration of education: in Athens education was left to the discretion of the parents, though there is no doubt that public opinion was strong, and exercised a considerable amount of indirect control over the parents.

The Spartans of this period were not given to much theorising about their educational system, but they were conscious of its existence and highly approved of it. For them it had a definite meaning, and above all it had a clear purpose which it thoroughly served. It was either evolved by a cosmic process of which the Spartans became aware only after it had been developed, or it had its origin in a deliberate attempt to meet a particular need. If there ever was a Lycurgus he was an educational theorist. It does not at all follow that he invented a new system of education. All that is implied is that he took into account the various ways in which the young of the state could be brought up, and after a careful consideration of all the circumstances of the case came to the conclusion that the method of completely subordinating the child to the state was the best form. If he existed, and if he established this system of education, he has supplied one of the best

illustrations of the successful application of educational principles. The Sparta of the fifth century B.C. was the complete realisation of the ideal of a military state, as the result of deliberate education.

The Athens of this period certainly represented a higher ideal than her military rival, but this ideal brought with it some moral and social defects. Individualism was rampant, and this was repugnant to the theories of the time. For whatever was the actual state of affairs in Athens, the ideal was certainly that the state was all important and ought to have the first place. We find that at the back of the minds of the educational reformers of the time there was always the picture of a remodelled Sparta, a Sparta with all the strength of the existing Sparta, but purged from coarseness and intellectual dullness.

Of these reformers Socrates was the most individualistic; but this does not mean that he declares war against the state in favour of the individual. On the contrary, in his own case he bowed himself to die by the hands of the administrators of the laws, even when he recognised that the laws were unjust—calling them father and mother, and more.[1] Yet he acknowledges a wider distribution of the universal element than does Plato. He recognises the divine element as being present in all men, though in some it is much more obscured than in others. Every individual is potentially divine, though his higher qualities may never be developed. To come into his inheritance the individual must recall his knowledge of the divine. He must know God, and as Manilius expresses it:

"None can know God who shares not in the Godhead."[2]

Cobblers and grooms and all manner of baseborn men have the divine spark within them: they share in the Godhead, and it is the business of the educator to help them to secure their own. Plato takes a less hopeful view of the possibility of raising all men to the highest level. His myth[3] about the irrevocable choice of fates in the

[1] *Crito*, § 50 ff. [2] *Astronomicon*, bk. ii. line 116. [3] *Republic*, x. 617 ff

mysterious changing house above, to which Er was admitted as spectator, illustrates the Platonic attitude. His spirited and his philosophic classes are separated from each other by differences in natural endowment. It is true that he makes arrangements in his state by which individuals may pass from one class to the other if certain qualities are observed to develop in the individuals in question. But in such cases it is clear that Plato would regard the original classification as being badly made, and the promotion or degradation as a mere readjustment so as to secure a classification that ought to have been made at first. The indiscriminate nursing and training of children in the ideal state makes it clear that the class to which a child is to belong has to be determined by what is in the child.

This must not be interpreted to mean that Plato takes a low view of the power of education. With the educator rests the responsibility of making a given child a good money-getter, a good soldier, or a good philosopher: but it is a waste of the educator's time to try to make a good soldier out of a child that is meant by nature to be a money-getter. Obviously it is dangerous to press this distinction too far. There is no psychological reason why we should have three classes and only three, or that those three should be so definitely marked off from each other. Ordinary experience shows us that of a good money-getter we can make a soldier of some sort. The distinction, in fact, is not psychological at all but practical. It owes its importance to an intelligent application of the principle of the division of labour. It is obviously bad policy to spend time in making an indifferent soldier out of a citizen who could become an excellent shopkeeper. Underlying these practical considerations is to be found an educational principle of the first importance. It is for the good of the state that the individual should be allowed to develop along the lines of his own greatest power. Only when he is doing what is best for his own development is the individual doing the best for the state. This involves the

idea of self-realisation as the end and aim of education on the Platonic basis. The state can get the best service from the individual only on the condition that it allows him to develop in such a way as to bring out the best that is in him. We are thus led by a more or less utilitarian statecraft to a view of education that may fairly be called liberal. The man can become a good citizen only on the condition that he is at the same time a fully developed individual.

This view of a liberal education was not shared by Xenophon. As an admirer of the virtues of ancient days he had the desire to turn back the clock of progress, and to revert to the simplicity of the olden time. Accordingly he neglected the claims of the individual as such, and strove to sink the individual in the citizen. In the *Cyropaedia* we have really a reversion to the Spartan ideal. In this book perhaps the most striking thing is the omission of the literary and intellectual elements. No doubt Xenophon was not slow to observe how strongly the Athens of his day was moved to individualism by the sophistic teaching then popular; and instead of setting himself to discover a way of utilising this teaching in the interests of the state, he deliberately cut it out of his considerations.

Aristotle makes a different approach to the subject of education. It is perhaps unfair to say that the individual is more prominent in his mind than in Plato's or Xenophon's, for in the ultimate resort every educator recognises that his work must be carried on through individuals. It may not unreasonably be maintained that both Plato and Aristotle set out with the intention of seeking the real good of the individual, but that while the earlier philosopher sought the good of the individual through the good of the state, his successor reversed the process. In the *Politics* Aristotle treats education mainly as it affects statecraft, yet the individual is not so completely subordinated to the state as in the writings of Plato. The cause is to be found partly in the nature of the work in which the subject is treated, and partly in the difference between the philosophical standpoints of the two writers. The *Republic* is

an ideal, with all the limitations that such a literary form entails. Its author had for his end the improvement of the social and moral condition of the city. He saw the weakness inherent in the excessive individualism of the Athens of his day, and not unnaturally went to the opposite extreme in his efforts to correct the evils he was attacking. In his moral lesson Plato describes men as they ought to be: he cuts himself adrift to a great extent from the past: he claims a clean beginning. Aristotle had no doubt an ideal before him as he wrote, but he dealt with it in relation to the possibilities of actual life. So far from claiming an entirely fresh start, he bases all his arguments on the experience of the past. Plato's tendency was to evolve all his theories out of his inner consciousness, while Aristotle rather prided himself on entering upon no discussion till he had mastered all the facts available from past experience. The individual consciousness does not provide a sufficiently broad basis for generalisation. We must appeal from the experience of the individual to the experience of the race. The personal experience of the individual is mainly valuable as supplying a key to the experience of others. We must always interpret the experience of the race in terms of what we have ourselves lived through. Objective experience is meaningless unless subjective experience is able to supply the key.

But while Aristotle gives freer play to the individual he is by no means inclined to allow individual peculiarities to interfere with the duties of citizenship. The state and the individual mutually exist for each other, and the individual is incomplete and incapable of reaching his fullest development, even as individual, apart from the state. Like all paradoxes his "The state is prior to the individual" owes its piquancy to an exaggeration of an unusual aspect of truth. Were man not a political animal it would be true but commonplace that the individual precedes the state. It is because by his very nature man is not born to himself alone, and cannot live for himself alone, that there is truth in the saying that in idea the state precedes the individual.

Naturally the fuller, if less effective, statement is that the individual and the state imply each other and neither can exist apart from the other. The state forms the mould in which the individual is to be cast, so that by its very existence the state seems to dominate the individual: yet since the nature of the mould has been determined by the nature of the individual to whom it is to be applied there is no really external coercive force involved.

Aristotle, however, makes an advance on Plato in not admitting the right of the state to oppress or suppress the individual. He has no sympathy with Plato's view that the happiness of the whole may be gained at the expense of the parts. This implies that Aristotle has grasped the organic conception of the state. He holds it to be evident that the happiness of the state and of the individual are the same. The occasional severity of the state really owes its origin to conditions imposed on the state by the needs of the individual.

The idea of the state as a sort of divine power embracing and absorbing all individuality is a very alluring one, and sometimes tempts writers to express themselves in such a way as to get themselves misunderstood. Hegel was so impressed by it that he is said to have allowed it to interfere with the just claims of the individual consciousness, at any rate on the moral side. It is maintained that the subjective conscience gradually acquired for him a sinister connotation in which caprice was prominent, and in which this conscience is made to appear as in its essence evil. Truth has to be sought in objective morality which transcends and gives meaning to subjective. We are told that in Hegel's writings this objective morality appears to have acquired a sort of separate existence independent of all consciences to which it may be applied.

"Whether the individual exists or not is a matter of indifference to the objective moral order, which alone is steadfast. It is the power by which the life of individuals is governed." [1]

[1] *Philosophy of Rights*, § 145. If this passage is read in its context it will be found to give no justification of the suggested independence of the

The ancient Greek state corresponded to an active realisation of this objective moral order. For it took upon itself to modify the character of its citizens by making certain definite enactments which every citizen was called upon to observe. Obedience to a prescribed code implies the acquiring of a definite mode of action with a corresponding character. It is true that the state is not in a position to act quite arbitrarily in the matter. As an organism it has a past as well as a present, and the past dominates the present. Even when the state sets about deliberately modifying the character of its citizens, as when it adopts a new system of education, it is still limited in its choice of type by its needs, and these are determined by its past in reaction on its present. This is true even when the state takes thought and deliberately seeks to mend its ways. When Sparta handed itself over to Lycurgus it left him free to act, but all he could do as the result of his theorising was to carry into effect the longings of the citizens after the old simplicity and austerity that they felt to be good, but were too effeminate to reintroduce for themselves.

There is a general impression that Roman education follows naturally from Greek education, this view being strengthened by, if not indeed founded on, the time-honoured epigram: "Captive Greece took captive her proud conqueror." There is, however, no direct evolution from Greek education to Roman. The two ran a similar course at their earlier stages, and at the end Roman education appropriated some of the later and less desirable elements of the Greek. In both cases there was a heroic age during which men were moulded by the actual experience of life into the sort of citizens the state required. At the earliest stages, no doubt, Rome was an isolated state like any of those with which we are familiar in Greece, but as it extended its borders it began to take on a different character. Not only did it not fear proximity to the sea

subjective and the objective, an independence that is opposed to the whole spirit of Hegel's teaching.

and the foreign intrusions the sea rendered possible, but it actually used the sea as a means of appropriating whatever of good it found abroad. The Roman toleration of other customs and religions marked a different social ideal from those of Sparta and Athens. But with all this there was the usual struggle between the interests of the individual and those of the state, though there was at no time an acceptance of the Spartan ideal that made the state supreme by deliberate legislative enactment. The force of the conflict between the individual and the state was broken by that peculiarly Roman institution, the *patria potestas*. The family rather than the person became the unit, and in this way the tendency to pure individualism was checked without any outside pressure beyond the very effective coercive power of public opinion. "Then all were for the state," no doubt, but the assertion implies that there was credit in being for the state, which would not have been the case had society definitely subordinated the individual by legal enactments. So far as individualism is concerned, Rome resembled Athens rather than Sparta.

With regard to education, Rome began like Greece with the training of the home, and when schools were introduced they were voluntary institutions. So long as education was confined to the home, and to the ordinary experience of life, there was little need for theory. It was only when Greek influence began to introduce refinements into educational process that interest in such matters was aroused, and theory arose. But it has to be noted that the characteristically Greek theory of education in relation to the state was dead long before Rome was moved by Hellenic influences. The individualism of Athens had triumphed in spite of the efforts of the reforming philosophers, and education had taken the form of mere rhetoric and sophistic. Had the Spartan practice, or even the Platonic theory, been properly presented to Rome it is possible that it would have received a welcome. At any rate it would not have aroused the opposition that fell to the lot of the first Greek teachers at Rome. The Spartan ideal

would have had certain attractions for the law-making, law-abiding soldier citizens of the Republic, but the purely literary and philosophical training of the rhetoricians had little that appealed to the typical Roman, who, on the contrary, would certainly have applauded Plato's simple plan of highly honouring, but firmly dismissing, the poets. Indeed as actual fact the Romans did try—though they were not ultimately successful—to get rid of what they considered to be the effeminating influence of the Greek literary education. When in 161 B.C. the Senate took measures to get rid of philosophers and rhetoricians, and when in 92 B.C. the Censors condemned the schools of Latin rhetoricians, we get evidence of the existence of some sort of educational theory among the Romans. By this time at least they had begun to consider the political effects of different forms of education, and had come to the conclusion that a purely literary education was not in the interests of the state. To the sterner Romans a knowledge of letters sufficient to enable the citizen to master the laws was considered sufficient, and there can be no greater contrast than that between the young Athenian brought up on Homer and the young Roman brought up on the laws that were exhibited in the Forum. We have here two conflicting ideals of the mental content that should result from education.

In spite of all this, Rome did take up Greek culture at a later stage and carried it on quite successfully, though on purely individualistic lines. The fact is that the national spirit of Rome was antagonistic to rhetoric and sophistic, and opposed them so long as it was free. When the empire came, and real freedom was lost, then the rhetorical training of the Greeks was encouraged, as taking away the attention of men from matters that were more dangerous to the state, and as supplying an excellent training for the career of the orator, which under the new conditions had acquired very great attractions. As a consequence, there was a considerable development of educational theory along what may be called professional lines,

as we shall see when we deal with Specific Education. So far, however, as the wider view of state education is concerned, it may be said that never since the Greek times till the quite modern period of national education has there been a systematic attempt to correlate the functions of the state and the individual by means of education. It is true that in the church, and in various limited spheres there has been a more or less deliberate use of education by groups in the way of modifying individuals in the interests of those groups. But generally speaking the influence of society has been exercised on the individual without society becoming conscious of the fact.

The theory of education must take account of the training of a people as well as that of the individual. Yet of the two the individual naturally bulks more largely in the mind of the educator. We have seen that neither individual nor state can be understood in its fulness apart from the other. Yet of the two the individual is the one to begin with. He is the unit out of which states are built. Hitherto psychology has practically limited her attention to him, though of late, as we have seen, there has been a great development of the study of human beings in their inter-relations. It is now fully recognised that we cannot fully understand the individual till we have examined him in the light of his surroundings and his interactions with his fellows. But on the other hand it is impossible to get over the fact that the individual is a separate entity, marked off from all other individuals, though capable of entering into the most intimate relations with them.

By treating the individual as a mere means the state fails to obtain from him the same service it would if he were recognised as having an end of his own. Though in Plato's ideal republic the individual is sacrificed to the state throughout, from the lowest to the highest grades of citizenship, in the actual practice of the Athens of his time the men at the top of the social organism were treated, and treated themselves, as ends. It is true that in order

that the few should be able to realise themselves as ends, the many had to be treated as mere means. But the ideal underlying the Athenian practice was clearly self-realisation for the citizens who counted. The fastidiousness about professionalism, and the ill-repute of mere technical skill, are suggestive indications of the underlying theory of complete and many-sided or all-sided self-realisation.

The view of the state as an organism necessarily recognises the right of the individual of every grade to self-realisation, though it emphasises the need of absorption in the state in order to complete that realisation. That the state may realise itself it is necessary that all the citizens should also realise themselves in "their several places and relations." No doubt in the old states every endeavour was made to keep the individuals permanently in those places and relations. If any change was permitted it was limited to the lower rungs of the ladder. Any alteration in the higher stratum was felt to be fraught with danger to the personal interests of the governing class, and was therefore vigorously resisted. Still, under certain conditions, the slave was to have the power, by meritorious service, to earn his liberty. Among the Romans the existence of the *peculium* indicated the possibility of interchange among the different elements making up the social stratification, and the progress of civilisation has rendered this interchange increasingly easy. The looser organisation of modern society is all in favour of this easier interchange. So long as birth and close corporations dominated society there was great difficulty in the individual passing from that condition in life to which it had pleased God to call him. The changes that have made it possible to accept money as at least to some extent a more general standard than birth have also made it easier to establish a free passage from one class of society to another. Even in an old and settled country like England we have the ease of interpenetration of social classes represented in perhaps an exaggerated form in the homely saying among the north country folk: "From clogs to clogs in three generations."

Then we have evidence from quite a different quarter in the writings of the fourteenth century Arab writer, Ibn Khaldun,[1] who tells us that nobility seldom remains longer in a family than four generations, and that scarcely any case is recorded in which it exceeded six. But it is in the United States of America that this case of interpenetration appears in its most striking form, and it is natural therefore that the idea of self-realisation should there have taken its most interesting development.

If we make a careful comparison of the educational literature of England and America, we shall find that there is a certain difference in the emphasis laid on self-realisation, a difference that is reflected in the fact that the Americans are beginning to show a preference for the form self-*expression*. This is not an accidental difference, but indicates a characteristic attitude towards human life. Self-realisation is in itself an all-comprehensive educational ideal, so wide, in fact, that we cannot treat it satisfactorily as a whole till we have passed in review all the educational systems. But in the present connection the aspect suggested by the term self-expression calls for immediate treatment. It emphasises the side that is usually indicated by self-assertion. Now the very notion of self-realisation, even in its highest form, necessarily implies a certain amount of assertion of the self. It demands to come to its own, and must in self-defence bring itself into a certain prominence. But self-assertion is essentially individualistic, self-realisation is not. The wider idea is based on the organic conception of society, and considers the self not so much as realising itself against society as realising itself in society. It has to be noted here that we are now speaking of the pressure of society as an organic force, and not as a self-conscious power. So far as deliberate repression of the individual by the state is concerned there is no country freer than the United States. Yet there the antagonism between the interests of the individual and

[1] Quoted by Professor Flint in his *History of the Philosophy of History*, p. 165.

the interests of the state is very marked. Many of the best people in the country will have nothing to do with the carrying on of its government. They are more profitably employed with their own affairs than with government business, and can well afford to lose a little through the bad management of public matters. If society in its corporate sense will leave them alone, they will certainly not interfere with society. The demand for individual freedom is insistent at present on both sides of the Atlantic. The characteristic cry of the age is: "I must be allowed to lead my own life." But this is hardly the same thing as self-realisation. The individual who clamours to lead his own life is not seeking to realise himself, but is merely protesting against the limitations of society that hinder him from doing certain things that he wants to do. It is not that he wishes to bring out all the possibilities of his nature, but that he wishes certain impulses to have free play. The two ideals are quite distinct from each other. Self-realisation does not necessarily demand freedom from restraint. In many cases it can be attained only by submitting to restraint. All the paradoxes that centre round the idea of losing the soul in order to find it, and of finding perfect freedom only in service, are recognitions of the need of developing our higher selves by social interactions that involve a considerable amount of subordination of the self to others.

The radical difference between the ideals of self-expression and self-realisation is that in the one case we take the self as ready-made and only needing scope to express itself, in the other we regard the self as but a bundle of possibilities that need to be worked out if they are to reach satisfactory realisation. The educand starts with a given nature; it is the business of the educator to enable the educand to express that nature. This is something totally different from saying that the educand is born into the world with a nature full of possibilities, and that the educator's business is to find out what those possibilities are and to provide the best means of realising the highest of them. Mere self-expression carries us back to a state of nature in

which each struggles for his own hand. The higher ideal recognises that the self has to live with other selves, and that he is therefore unable to "lead his own life" in the ordinary sense of that phrase. His self must have fair play no doubt, otherwise it can never come to its best. But its relations to its fellows form an essential part of its training towards a higher level. The content imparted is essential to the full development of the self. The higher ideal is represented by the fact that the educand must be helped to realise his self and not merely to express a self that is already there, ready-made. The content necessary to enable the educand to succeed in self-realisation is to be obtained only in the social environment. Here, as elsewhere, the individual and the state must supplement each other.

The aggressive form of the self-expression ideal carries us back to the state of primitive conflict, the Hobbean *bellum omnium contra omnes*, and to the resulting "compact theory" that introduces some sort of order into the chaos. The true theory of self-realisation carries us beyond the more or less mechanical and now discredited theory of pact to the higher notion of an organism, which is certainly present in germ in both Plato and Aristotle. On the Hobbean principles the self-expressionists may claim that society is not keeping to its pact, and that it is necessary for the self to strike out for its rights. But on the organic theory real conflict between the individual and the state is impossible since the interests of the two are identical.

With the introduction of Christianity educational individualism was greatly strengthened. In the eyes of the church each soul stood by itself, was of incalculable value, and deserved all the attention the educator could give it. So far as Caesar was concerned, the individual might be moulded by the state to suit its own ends, but for the Kingdom of God he had to be specifically prepared. The value of the individual as individual was not only recognised but emphasised, and Christian educational theory was modified accordingly. It is true that the Christian

was also a citizen, but of a "city not made with hands." As a member of the civil state he could be trained for his functions largely by the mere process of performing them, but as a future citizen of the city on high he needed preparation. The two citizenships, in fact, may have conflicting claims: preparation for the one may disqualify for the other. Accordingly, there was attraction in the idea of a model state upon earth that should foreshadow the city of God. In spite, therefore, of its marked individualism Christianity was drawn towards a form of corporate life that should be distinctly educational. Though not usually so regarded, monasticism is really an educational movement. It fulfils all the conditions that we have found to form a part of the connotation of education. It seeks to modify the nature of the educands: it implies deliberate purpose: it uses means to attain its end. It is bi-polar, since it implies either the conscious educative influence of a superior of some sort, or the collective influence of the society so exercised as to produce a predetermined effect on the individual members.

Monasticism is based upon a definite theory of human nature. The aim is to produce a particular type of human being, and its method is largely that of inhibition. Adopting the view that human nature is radically bad, the founders of monasteries sought to withdraw themselves and their followers from the contaminations of society, and in more or less complete isolation strove to get rid of those qualities that they regarded as undesirable.

Monastic life differs from life in ordinary society in several ways. First, the individual and the monastic society have the same end in view: the purpose is to work out certain of the evils inherent in human nature, and to produce as a result individuals of a particular type. Further, the individuals become members of this artificial society with their own consent, and since individual and society have the same end in view, it would seem as if in this case we had eliminated the antagonism inherent in society in general. But the interaction between the indi-

vidual and the rest of the community remains. Monasticism is not a mere fleeing from society. Coenobitism has not the same meaning as the life of a religious hermit. It is not so much the fleeing from society as the manipulation of a particular form of society. Its aim is character-building, and one is tempted to think that it is based upon a realisation of the truth embodied in the familiar lines from Goethe:

> "Es bildet ein Talent sich in der Stille,
> Sich ein Charakter in dem Strom der Welt."[1]

Unfortunately the conditions set up in the monastery rather discredit this view. The idea is not so much to create a stimulating environment in order to develop a sturdy character, as, rather, to arrange the environment in such a way as to reduce to a minimum the number of evil influences to which the members may be subjected. It is a co-operative character-building society. The essence of a co-operative society is that the operations of the group are for the advantage of each individual member. The society has no aim of its own separate from the good of the individuals. It is true that in an ordinary co-operative society there is apt to creep in, fostered by the officials, a set of interests that are to some extent hostile to the interests of the members. Societies have a tendency to take to themselves a sort of corporate personality, and to acquire an individuality that marks them off from all others. This is not unknown in the monastery, where not only does the organisation tend to establish a corporate feeling, but the place of the monastery as a part of an organisation of a much wider character aids in welding each monastery into a distinct unit both in relation to the wider organisation of the church to which it belongs, and to the individuals that make it up.

Perhaps the most characteristic feature of the monastery society is that it is as a society self-conscious. It has been formed for a definite purpose and is quite aware of that

[1] *Torquato Tasso*, Akt i. Szene 2.

purpose. Under ideal conditions the members seek the monastery in order to acquire a certain kind of character, and with the full knowledge of the sort of character they desire. They are aware that the other members of the institution are seeking the same end, and the advantage of co-operative activity is realised. The members feel that they can support each other in striving after the common aim, and that they will at the same time, because of their mere collective interaction, provide a suitable environment for the production and cultivation of the desired character.

Monasticism as an educational system is therefore inherently and fundamentally individualistic, however communistic it may appear in form. The monastery exists for the sake of the individual souls of the members. No doubt the monks do their best to help each other in the process of soul-saving; but the test of success is the number of souls saved. The monasteries, it is true, have other aims, social and religious. The monks practise charity and many other virtues for the glory of God. But fundamentally monasteries are educational institutions, preparing their educands for the life of another and a better world; and in the educational process there is no antagonism between the interests of the educands and those of the institution.

We have said that the methods of monasticism are mainly inhibitive, but the system is not without its positive side. In order to succeed in the fight against our evil tendencies we need all the help we can get, and those who were engaged in the monkish training recognised the fact. All the routine of the life (services, prayers, readings and so forth) had its positive effect, and reinforced the power of inhibition. Avoiding all opportunity of evil activity, and restraining all activity that may have an evil direction form the negative aspect of the monastic method; its positive aspect is represented by the force of imitation and the cultivation of habits of right action.

The further evolution of the monastic ideal is complicated by the introduction of what is usually called learning.

But before considering this disturbing element we shall do well to examine the gradual modification of the social forces inherent in monasticism. In this chapter our main interest is in the interaction between the individual and the social environment in which he finds himself, and the manipulation of this interaction that forms the basis of the monastic ideal is not confined to a system that is avowedly monastic. The principles underlying the monastic system are capable of application to education quite apart from the special form that religious monasticism assumed. The moral training of the Jesuits, for example, was to a large extent based upon the principles in question, though there was the important difference that positive incentives to goodness were brought more prominently forward. The social aspect of the Jesuit training is exemplified in the systematic use of emulation and the love of the admiration of classmates, and also in the constant supervision of the educands. This latter characteristic is shared by the Jansenist system, as worked out in connection with the "Little Schools." The educand is never to be let out of sight of one or other of his educators. The Jesuits were more willing to delegate this supervision than were the Port-Royalists, whose system, indeed, tended to resolve itself into individual training. The public opinion of the school community was the important thing for the Society of Jesus. So long as the educand was made to feel that he was continually under observation, the Fathers were satisfied. It was not regarded as essential that the observer should in every case be a master, as was the case among the Port-Royalists. The social aspect of the Jesuit training is thus brought into relief. Their community was a society in which, as in monasticism, the whole force of public opinion was working towards an ideal deliberately determined by the order. So far as the educational process was concerned there was no conflict between the interests of the society and the interests of the individual pupils. Educators and educands worked towards a common end, though of course there was always present that interaction that marks all progress.

All forms of education that imply a common life and a uniform system of selection of educands may be said to embody the monastic principle, from the barrack life of the Spartan youth to the equally barrack life of a continental *internat* at the present day. We shall see, when we deal with Naturalism, that one of the developments away from the strictly monastic ideal is the introduction of as near an approach as may be to a family life, even though the approach involves co-education. This cuts right across the monastic ideal of separation from the world for the good of the educands. Though the English public school makes a less dramatic protest against the idea of separation, it certainly does not support it in the monastic sense of the term. Our English public schools are sometimes condemned as mediaeval and indeed monastic, and there is this truth in the charge, that they represent probably the highest results of the evolution of the educational theory underlying monasticism. In them we have a much nearer approach to the ideal set forth in the couplet we have quoted from Goethe. The school world is much liker the real world, than is the carefully prepared environment of either the Jesuits or the Port-Royalists. We are told that it takes all sorts of people to make a world, and the English public school is quite liberal in its interpretation of the proverb. It is not to be supposed that the English masters are careless about allowing evil influences to penetrate into the school environment. But it is not regarded as the first duty of the schoolmaster to keep his boys in an unnaturally rarefied moral atmosphere. In the school society the boy is expected to meet all sorts of temperaments, and to learn how to make the best of them. It has to be noted that the English public school boy is almost as much under public observation as is his fellow in a Jesuit school, but the English boy is not made aware of the fact; and even if he were, it is not likely that he would resent the unorganised surveillance of his peers in anything like the same way that he would resent observation by masters. Indeed so great is the power that the boys

exercise over each other that it is sometimes said that the masters have abdicated in favour of the boys. Speaking of the Arnoldian Legend, Mr. Oscar Browning tells us that this legend

> "contained, alas! in germ the subjection of the master to the boy in standard, tastes, and habits, which threatens to be the ruin of our public schools." [1]

What is called the *Elder Brother* theory is rather resented by many of the masters; but even if the master's power were reduced to that of an elder brother—and there is no evidence that this is the case—anyone who has lived in a family of boys knows that age introduces quite a sufficient element of difference in the power of the individual members to give that variety to the society as a whole that is necessary to produce a corporate life parallel to what the boys will afterwards find in the world.

While the theory on which the Public School is worked is certainly involved in the monastic ideal, it has undergone certain modifications in the process of development. To begin with, the school prepares for this world, and not merely for that to come. This enables the teachers to work at somewhat shorter range, and gives them better opportunities to test their work. Next, the relation of the educand to his surroundings is different, inasmuch as in this case the compact is made not between the educand and the educator, but between the educator and the parents of the educand. The educand is, therefore, in theory at any rate, in a position of acknowledged subjection, whatever may be the outcome of the modern development of the system. A still more important difference may be found in the inversion of the relative importance of inhibition and positive education. In the monastery the main thing is to inhibit evil tendencies; in the school the highest aim is to promote good tendencies. It is true that in the English public school inhibition is far from being absent,

[1] Monographs of the Industrial Education Association: *Aspects of Education*, p. 174.

though at first sight one is apt to think that the public school system is positive practically all through, at any rate so far as the official part of the training is concerned. It is sometimes complained that the pupils have no time to themselves, that they must be active at one thing or another, under direction, from morning to night. Many masters in fact, make it an avowed principle that their boys shall be so fully occupied with work and play that no time or energy is left to get into mischief. Obviously there is something to be said for this view, but it has its dangers. No doubt there is need for the warning about "idle hands," but the teaching of Dr. Watts does not cover the whole ground. Incessant "directed" activity leaves no room for the development of qualities that are essential for the true self-realisation of the educand. A stimulating environment with ample opportunities for the working of the forces of imitation and suggestion in a wholesome way is the ideal condition for positive education. But it is not to be forgotten that with all this positive work in our public schools it is notorious that there is a deep undercurrent of inhibition modifying in the most drastic way the life and work of the educands. The education that the boys give one another is largely in the form of inhibition. What one may not do is of at least as much importance in the school world as what one must do, and it cannot be denied that the inhibitory process of school life leaves permanent effects in after life. It is claimed that the type produced by our public schools is *sui generis*, and his uniqueness is said to be found mainly in his inhibitions. We are told that it is much more easy to predict what a public school man will not do, than what he will.

So far we have been dealing with the development of monasticism mainly in connection with the effects of a society organised for educational ends. Accordingly, we have not considered the meaning and value of the more or less intellectual instruction given at the monasteries, and in the institutions that succeeded them. The English public school as a teaching institution can trace its origin

back to monastic models, but on this side there is a much wider divergence than on the side of the social interactions. There has been much more deliberate theorising regarding curriculum and methods than regarding the educational effects of an organised society. To understand the evolution of the monastic ideal in relation to knowledge, we must consider how it reacted on learning.

At the beginning, Christianity encouraged learning, at least to the extent of enabling the candidate for admission into the church to understand the principles of his religion. By and by there arose a certain antagonism between the professors of Christianity and those who sought to promote secular, or, as it was protestingly called by the churchmen, pagan learning. But even when pagan learning was excluded, there remained a wide field in which the clergy at any rate might study with profit. Naturally the monasteries supplied excellent opportunities for the pursuit of learning, and it was only what might have been expected when we find that schools began to be attached to most of them. The great majority of the pupils were young people who were looking forward to enter the monasteries in due course, but a certain proportion of lay students was usually included. Within the monastery itself there would always be found a certain number of men who were naturally studious, and who would accordingly seek to carry on their studies beyond what was required for the mere purposes of teaching in the attached school. In the better equipped monasteries such students found ample opportunities in the way of books and time to read them. Many restrictions, however, were imposed by the church. Not only were the profane books that dealt with the pagan mythology forbidden, but the writers on philosophy were regarded with suspicion. As the abstruse subject of Theology was developed, there was more and more danger of conflict between the church doctrine and the views of the philosophers. Plato was suspect, and Aristotle became the standard of philosophical orthodoxy. Sometimes it was difficult to get his views to square with the dogmas

of the church, but since these dogmas were in every case taken as the data of the problem, all that was required was ingenuity in manipulating philosophical principles so as to bring them into line with the data provided. This ingenuity the monks supplied in astonishing abundance. As the centuries passed and knowledge increased, it became more and more difficult to keep the peace between philosophy and theology, but the subtlety of the Schoolmen kept pace with the growing burdens laid upon them, and there was no lack of "subtle," "angelic" and "seraphic" doctors to keep the balance true. To be sure the development of the formal side led to a certain cleavage. Scholasticism differs from monasticism in that its aim is the acquiring of clear knowledge instead of the modification of character. The distinction is marked at the later stages of scholasticism by the rise of the universities as independent institutions, though many of the schoolmen are found attached to monasteries up to the very end of the Scholastic period.

The characteristic feature of scholasticism is thus an excessive development of form at the expense of matter. It supplies in fact a typical example of a process that is well marked in the history of the evolution of educational theory. Each new system, or each new variant of an old system, begins with a rich content, and supplies the educand with abundant material to work upon. Gradually this material gets thoroughly well arranged, and thus forms a capital basis for educational work. The next step is the over-organisation of matter, with the consequent predominance of the formal element. By and by formalism develops to such an extent that there is little but form left, and there is room for the negative movement and a new kind of education.

Scholasticism supplies one of the longest beats in the rhythm of educational theory. The keenest intellects of Europe had been sharpening themselves for something like five centuries on problems of ever increasing abstractness and subtlety. In themselves these problems are probably

insoluble. We are far even yet from having attained to certainty about universals and the principle of individuation, though we make shift to work along on plausible theories. But under the conditions imposed on the scholastic thinkers by the church, a satisfactory solution was out of the question. Observation and thought pointed one way, theology directed in another. The result was that dancing in their chains the scholastics acquired an altogether exceptional skill in the process. Anyone comparing the essays in *Lux Mundi* with the work of the scholastic masters dealing with the same topics cannot but feel that *logical* deterioration has taken place. So far as it represented an educational system, Scholasticism must be regarded as the most nearly perfect formal development ever reached. Towards the end of the scholastic period when everything had been organised and reduced to exact logical order there were those who found a satisfaction in putting their pupils through the logical processes less for the sake of the results in knowledge than for the effect in sharpening the wits of the students. If formal training ever had a chance of developing its possibilities it was then. Its success as mere instruction cannot be denied: a French writer, indeed, becomes eloquent over its perfections:

"What is called Scholasticism is in effect nothing but a form of instruction (*enseignement*) arrived at the limit of its development, having realised all the perfections of detail, having reduced knowledge to definitive formulae, having brought light and order everywhere.... It is in reality the masterpiece of instruction; it is instruction conscientious, scrupulous, giving nothing to the chances of inspiration, foreseeing everything, regulating everything; instruction rigorous, logical *par excellence*."[1]

Naturally all this praise is modified by the fact that the material of instruction was strictly limited in amount. The applause is given for the exposition, not for the discovery of knowledge. It was the absolute need for fresh

[1] L. Dugas: *Le Problème de l'Éducation*, p. 90.

material that broke up a system of practically perfect exposition, for it has to be noted that exposition must bear a direct relation to the subject matter. New discoveries cannot be kept within old forms.

Thus it came about that when Scholasticism had exhausted its mandate, the long period of lethargy that followed was broken by the influx of new matter that came with the Renaissance. The inevitable reaction against the formalism of the scholastic period is most strikingly represented in the teaching of Rabelais. In his own life he supplies on a small scale an illustration of what took place on the wider stage of the world. After escaping from a monastic tyranny that had lasted during youth and early manhood, this "young fellow of forty" gained the freedom of real life in society. By and by he set himself to describe in various parts of his inchoate works the kind of education that he thought most desirable. This is still largely bookish, but books are to be used for the knowledge they convey, and not as limitations of the freedom of thought of the reader. The student is further to be encouraged to acquire first hand knowledge of the facts of science, and in general to make himself at home in the real world of men and things, instead of confining himself to the squirrel-cage routine of the scholastics. It seems impossible to describe a model educand without making him seem something of a prig: but Rabelais' Eudaemon stands out as a much more human being than most of his kind. The reader has much less fear about Eudaemon's future among ordinary men and women than is usual in the case of the products of a deliberate innovation in education. Rabelais' idea of the natural man has a healthy out-of-doors suggestion about it. No doubt the underlying ideal has a certain affinity with the heroes of the songs of the Goliardi. Perhaps this was inevitable at the time at which he wrote, and from the man that he was: but this looser side of the natural man is not an essential feature of Rabelais' educational conception, and certainly does not appear at all in the education of Eudaemon. What is

fundamental in Rabelais' scheme is that the man should be allowed to develop according to the laws that are inherent in him ; to become, in other words, what he was intended by his Maker to become. Nature is not to be baulked by the formalities of the schools.

Thus in his own person and writings Rabelais represents the double reaction against Scholasticism: he is at once naturalist and humanist. It would seem that Naturalism was the more direct reaction against the bookishness of the scholastics, and it cannot be denied that there is a stronger antagonism between naturalism and scholasticism than between scholasticism and humanism. But while the revolt against the old order was both naturalistic and humanistic, the more effective agency at that early period was Humanism. It supplied the very thing that at that time was lacking. Scholasticism was perishing through a dearth of content. Humanism came forward with content in abundance. Naturalism was in its essence antagonistic to both Scholasticism and Humanism, inasmuch as it is a reaction against bookishness of all kinds. But since Scholasticism was much further gone in bookishness at that time than was Humanism, the naturalistic attack was directed mainly against the schoolmen. But the time was to come when Naturalism would direct its weapons against the humanists in their turn. Before this could take place, however, Humanism had first to work itself out by developing its possibilities. These are largely bound up with the manipulation of knowledge as an educational organon. This view of knowledge we have found to be present in some degree in the scholastic system, but it comes into greater prominence from this time onwards, and modifies materially the evolution of educational theory. Before, therefore, we can examine the reaction of Humanism on Scholasticism we must consider the exact place of knowledge in educational theory. This involves a double approach. We must first deal with education as a preparation for a definite walk in life in which certain portions of knowledge have an immediate

practical value: then we have to consider that view of education that regards knowledge as a mere tool in the hands of the educator, by means of which he is enabled to cultivate in a purely general way the powers of the educand. We have to deal with Specific Education, and with Knowledge as an educational organon.

CHAPTER VI

SPECIFIC EDUCATION

WHETHER we regard the matter from the point of view of the individual or of the state, we observe that the beginnings of education are to be found in the preparation of the educand to be or to do some definite thing. The idea of education in the broad general sense, the culture of the human being as such, is of late development in the evolution of educational theory. All early education is a direct preparation for the life work of the individual concerned. It is an education *ad hoc*. Even the earliest form of education, that licking into shape that results from the mere process of living in an environment, has for its result—we can hardly say *aim*, since there is no definite purpose involved in the case of those who play the part of unconscious educators—the preparation of the educand to take his place in that environment with some degree of satisfaction to himself and others. When it comes to deliberate education, still at the early stages, the parent and society may not see quite eye to eye with regard to the education to be given, but they are agreed that it must be practical, which at that stage means that it must be such as to be directly applicable to the work lying immediately before the educand. This does not at all imply that every educand must be trained to take his place as a productive member of society. So far from supplying an individual capable of being applied to the needs of society, education may be called upon to produce an individual who is utterly dependent on others, and who is to spend

all his time in more or less dignified leisure. But even here special preparation is necessary in order to secure the qualities desired for such a situation. Education begins by being specific.

The state wants certain services rendered, and accordingly sees to it that a sufficient number of individuals get the requisite amount of special training. Nor is it to be assumed that this state of affairs obtained only at remote periods when selfish interests on the part of the state were openly defended. The caste system and feudalism no doubt served the purpose of maintaining the proper proportions among the various grades of citizens. But the influences that maintained caste and feudalism are no less marked to-day, though they work in different directions. When a nation at the present time takes thought of its affairs, and finding them in a bad way seeks to mend matters by an improvement in the education of its citizens, it usually adopts a frankly selfish policy of instrumentality, its educands being the instruments. The most popular argument in favour of the compulsory free education of the people is that this education pays the state by improving the quality of its citizens, in the sense that it makes the youth of the nation better fitted to enter upon those special kinds of work that bring prosperity to the nation. It is not that this education makes the young people first better human beings and therefore better citizens, but that it directly makes them more profitable members of the state. That they should be good citizens is also desirable, but at the early stages it is taken as a matter of course that the sense of citizenship will come from the mere fact of living in the state. It is true that at those early stages when the state is small enough to be visualised by the citizens there is no difficulty in getting them to regard themselves as members of the state, and to bring up their offspring as citizens in their turn. But when the state becomes vast, and too unwieldy for the individual imagination, citizenship becomes vague, and there arises, as in these latter days, a clamour to have citizenship itself

specifically taught. This is only one of the many cases in which people find that if they wish to produce a specific result they have to adopt specific means.

At the beginning of popular education it is quite usual to regard the educands as young human creatures who are being prepared to do a particular kind of work. At the early stages all education is really technical in that the educand is being prepared to do a definite kind of work. A man was trained to be a soldier, a priest, a ploughman, a lackey, and he learnt no more than was essential to his particular business. Naturally there was no limit to the amount of knowledge that might be communicated within the range of that business. The more the educand could learn the better for all concerned. Special knowledge in his own department, and particularly exclusive knowledge, had naturally a high value for the educand. For the place of private interest in education must not be overlooked. From the individual standpoint a good education is very generally valued because of the advantage it gives in the struggle for existence. Personal aggrandisement, an advantage over one's competitors, are more powerful motives in seeking an education for ourselves and those in whom we are interested than is the desire for general improvement.[1] A little extra attention from the teacher is what every selfish parent craves for his boy.

In states where a strong national system of education is in force, it is difficult to gain this individual advantage, for opportunities are widespread. But even in the strongest state-system there is usually room for the private enterprise that offers opportunity for personal aggrandisement. Among the Greeks, the Sophists made their name and their position by appealing to this desire for special attention. They did not profess to make their pupils good citizens, but promised to give them special knowledge,

[1] Speaking of the views of parents on education Ruskin says: "The education befitting such and such *a station in life*—this is the phrase, this the object always. They never seek, as far as I can make out, an education good in itself." *Sesame and Lilies*, § 2.

and to make them able to get the better of their adversaries, and generally to distinguish themselves in the state. No doubt the Sophists assumed on the part of their pupils the possession of a fair general education. The merely instrumental subjects were no doubt taken for granted, for there is no chance of gaining distinction among one's fellows by the possession of the beggarly elements of education. The real work of the Sophists began where the ordinary education of the schools left off. The students came to learn something of which the Sophists claimed to have the monopoly: the young men were to be trained to be the particular kind of person they desired to be. This training for particular walks in life to the advantage of the individual concerned has been common throughout the ages, and may clearly be regarded as specific education.

This aspect of specific education may be well illustrated in a very unexpected way from the history of the curricula in our English Grammar Schools. In the Introduction to his *The Beginnings of the Teaching of Modern Subjects in England*, Professor Foster Watson points out the great advantages the nobles and wealthy merchants of England had in the training of their sons as compared with the less favoured majority of their countrymen who had to send their boys to the Grammar Schools.

"The Grammar Schools were controlled largely by authority, which, after the manner of authority, sought to economise energy by drifting into tradition. The education of the higher classes was free as the winds. Subjects of direct usefulness or of social prestige could be chosen and could be pursued, often under favourable conditions.... A subject of study could receive its educational place *in so far as it tended to raise the index of the personal efficiency of the noble.*"[1]

Thus while Eton, Winchester and Westminster were "trivial" schools, and contented themselves with two out of the three arts of the "Trivium," the sons of the nobility and higher gentry were able to study whatever subjects their intelligent parents chose to select for them, and thus

[1] *Op. cit.* p. xxii. Italics mine.

secure a clear advantage for their future life by this specific education. No doubt the schoolmaster of the time would maintain that his course was a more satisfactory one, since it gave a thorough grounding in things that the pupils did not desire, but that he knew they needed. Many of his successors will be convinced that he was right. But in any case it is clear that the nobles did not share this view. They wanted their sons to be specifically prepared for a definite line in life.

The demand for specific education may come either from above or from below. From the governing classes comes the demand that there should be a definite preparation for certain inferior and even menial functions that undoubtedly would not attract candidates on their own account. On the other hand there is the demand from below for such a definite preparation as shall enable individuals to pass upwards and fill some of the posts that do attract. Naturally the pressure from above to get well-trained instruments is stronger than that from below to get attractive posts; for the first is general and quasi-official, and the second is only individual, at the earlier stages at any rate. In general the governing classes will be all in favour of seeing that the inferior sorts of work are well provided for by specific preparation of the young of the less favoured citizens, while they see to it that the better posts are filled by the preparation of the young of their own class. But when times of keen competition arise an enlightened society realises that it has need of all the available talent in the country from whatever stratum of society it may be drawn, and specific education is thrown open to all, in order that the talent that society needs may have a chance to develop itself. Thus in a time of war the need for naval officers may lead to the foundation of a School of Navigation open to all.[1]

In all this there may seem to be very little educational theory. An immediate need presents itself, and the educator takes the most direct way of supplying what is wanted. But when one reads round the subject one finds

[1] Cf. Foster Watson's Introduction to *The Beginnings*, etc., p. xxxiv.

that there is a great deal of theory in the arguments for and against the various proposals; just as when we come to what professes to be pure theory we shall find a very distinct reference to actual conditions.

Beginning on the more utilitarian and practical side we find that in the old times when the natural thing was for the boy to follow in the footsteps of his father, there was obviously great scope for specific education. With the development of society the range of possibilities for each child gradually increased, but there was one class that still inevitably followed in the steps of their parents. The heirs of persons who held the rank of hereditary rulers were naturally in a position in which it could be prophesied quite definitely the sort of life work they must undertake, and the educator could make his arrangements accordingly. The history of education shows that in the training of rulers we have the earliest and the most striking cases of specific education. In Aristotle we find the sentence:

"Nay, some persons affirm, that the education of those who are intended to command, should from the beginning be different from that of other citizens." [1]

There are special difficulties in deciding upon the education suitable for a prince. So many considerations claim our attention that the subject can hardly be treated honestly by a courtier, or intelligently by one who is unfamiliar with courts. But it may be safely laid down as a starting maxim that in the general part of education the young prince should be treated exactly like any other young person, though perhaps a case might be made out for a slight change in the ordinary curriculum. Most of the subjects in this curriculum have to be studied by all, and it is a blatant truism to say that the prince brings to the study precisely the same kind of mind as the others. When de la Mothe le Vayer composed special treatises for his pupil (afterwards Louis XIV.) under such titles as la *Morale du Prince*, la *Logique du Prince*, la *Physique du*

[1] *Politics*, bk. iii. chap. 4.

Prince, he showed himself to be a poor educator, whatever his claims may be to rank as a courtier. Logic and Physics must be the same to the prince as to other people, but when it comes to such subjects as geography and history it is at least open to discussion whether the matters involved should not be presented in a different way to the ordinary citizen and to the prince. Further, had the tutor produced a *Psychologie du Prince*, there is no doubt that he could have included in it a section or two on human nature that would prove of special value to those born to high estate.

In one of the most striking schemes for the education of a ruler we have the matter treated from the point of view of the whole education period. In Xenophon's *Cyropaedia* we have the education of the prince treated from the foundation, and not merely from the point at which differentiation ought properly to begin. This is quite in the line that specific education would approve. Its object always is to produce the best person to do a given piece of work. Sometimes it is content to get a well trained person, who has received an education on purely general lines, and give him a short special preparation for a definite piece of work. But in the case of the ruler of men, what is wanted is not merely a knack of doing something in the best and most economical way. The ruler's character is a part of his qualification for his specific work. Accordingly his whole training must have a specific bias.

The same thing applies to the orator in the sense of that word made familiar by Quintilian. He spent a large part of his life as a trainer of orators, and has left us a treatise on the principles of their education. The bulk of his *Institutes of Oratory* is taken up with what may be called the subject matter of oratory. It is a store-house from which public speakers may still draw much. But educators regard it, and are entitled to regard it, as one of the classics in their subject, since the whole book is written from the educational standpoint. His book indeed furnishes an excellent illustration of the close connection between general and specific education. In

the case of the orator it is perhaps more than usually difficult to separate the human being from the professional man. In any case Quintilian makes it quite clear that he intends to educate the man as well as the orator. He begins at the very beginning. Indeed he complains that the custom of his time makes it difficult for the trainer of orators to get at his students soon enough. He points out, what his successors are never tired of repeating, that one can never begin too early in the training of a mind, though one may well begin too soon in directing that mind to special work. It is clear from his text that he was familiar, as a professional teacher, with the complaint that his subject—the art of oratory—could not be taught. He had obviously been frequently told that an orator is born not made, for he takes special care to indicate what can be done for the orator by the skilful teacher.

This view that for certain of the higher functions of life it is impossible to train the human being, is of very general acceptation. But it contains no more truth than this, that a certain physical and mental constitution is essential as a basis on which to build. It is true that apart from certain gifts of nature it is impossible to make a poet, just as in the absence of certain other, and to some extent different, natural gifts it is impossible to make a soldier. But the theory goes further than this, and would seem to imply that not only is the power to become a poet present, but also a sort of fated adaptation to the poet's art. The theory goes further even than Carlyle's view of the great man as merely intrinsically great. The poet is born not only with the power to become a poet but the impulse ; not only are the qualities there but the irresistible desire to exercise them. Of interest here is the much discussed question whether it is possible for the born poet to miss his vocation. Galton stands for the general principle that genius always does find a vent, and there is a vague general impression abroad that the poet must express himself, that poetry like murder will out. Yet both in poetry and murder the negative instances are probably insufficiently considered.

At any rate with regard to murder the statistics of undiscovered criminals give the lie to the blatant proverb. In the *Elegy*, Gray offers a convincing statement, though of course not an argument, in favour of the view that there are many mute inglorious Miltons whose noble rage is repressed by chill penury.[1] Such blighted poets are indeed born but not made. Naturally it is open to anyone to argue that the finding of the means of expression is a part of the essential nature of the true poet. Against such an argument the gods themselves are powerless. The truth appears to be that here as elsewhere nature sees to it that the supply of poets is kept up by producing the raw material in excess. But there is much left to be done in the way of working up this material, not necessarily by the professional educator. The poet may be made by the joys and sorrows of earthly experience. It is sometimes said, indeed, that every man becomes a poet once at least in his lifetime. Suffering may make a poet out of material that might otherwise have developed only into a successful business man. There is room for an educator of some sort between the dawning of special capacity and its application.

Professional pride has certainly not a little to do with the popularity of this born-not-made view. It seems inherent in humanity to be specially proud of qualities for which we are in no way responsible. Thus birth is more highly esteemed than training. It is pleasant to think that there are few people who are capable by natural gifts of doing the kind of work that we, by our achievements, have shown lies within our powers. So the poet, artist, teacher,[2]

[1] In his *Poverty and Hereditary Genius* (Lond. 1905), F. C. Constable criticises Galton's position by working up the implications of Gray's "Their lot forbade."

[2] "Some people still believe that a teacher is born and not made, and yet a careful investigation of the efficiency of elementary teachers shows that, when such teachers were ranked by competent judges, specialised training stood out as the most important factor in general efficiency. in this same investigation, the time-honoured notion that a college education will, irrespective of specialised training, adequately equip a teacher for his work was revealed as a fallacy,—for twenty-eight per cent.

orator, cross-examiner, preacher, actor, all claim to be born not made. The climax is reached in Rodolphe's uncle Monetti, the inspired originator of the *Complete Guide to Chimneys*, who proudly proclaims: "The stovemaker is born, not made."[1]

Returning to the main subject, the truth is that the specific and the general are so closely inter-related in the process of education that it is impossible to keep them apart. The pupils in the old song schools were specifically prepared to take their place in the church choirs, but inasmuch as in order to do their singing work properly they had to be able to read, the general subject of reading had to be mastered before the specific subject of singing could be properly dealt with. The result was that reading had to be taught in those schools, and many of them took up other subjects as well, and gradually developed into ordinary schools by the mere enlargement of the curriculum. At the early stages in fact, the general and the specific are not regarded as separate. Whatever is necessary for the specific work for which the educand is being prepared is treated as in itself a part of his specific education. The whole scheme is *ad hoc*, in respect of the definite aim which the educands have in view. Specific education must include general education up to a certain point, and the more complex the ultimate process towards which the specific education leads, the closer must the connection be between the two kinds of education. Thus in his *Institutes*, Quintilian deals with the whole nature and training

of the normal school graduates among the teachers were in the first and second ranks of efficiency as against seventeen per cent. of the college graduates; while, in the two lowest ranks, only sixteen per cent. of the normal school graduates are to be found as against forty-four per cent. of the college graduates. These investigations, I may add, were made by university professors, and I am giving them here in a university class-room and as a university representative. And of course I shall hasten to add that general scholarship is one important essential. Our mistake has been in assuming sometimes that it is the only essential" W. C. Bagley: *Craftsmanship in Teaching*, p. 201.

[1] *Scènes de la Vie de Bohème*, chap. iv.

of the orator. For the orator must be a man as well as a speaker, and the kind of man determines to a great extent the kind of speaker. Quintilian gives a prominent place to the consideration of the qualities essential in the art, for though it is possible to make an orator, it is not possible to make him out of nothing. It is interesting to compare the boy that meets Quintilian's approval with the boy that pleases the ordinary intelligent schoolmaster. In the *Scholemaster* it is clear that Roger Ascham has a preference for the boy of "hard wittes,"[1] the boy who is somewhat slow in apprehending but very sure and steady in his work. Quintilian, on the other hand, with an eye to the future work for which the pupil is being prepared, says:

"Let the boy be given me whom praise stimulates, whom honour delights, who weeps when he is unsuccessful. His powers must be cultivated under the influence of ambition; reproach will sting him to the quick; honour will incite him; and in such a boy I shall never be apprehensive of indifference."[2]

It is because this preliminary selection of material is so commonly neglected that there is so much waste in specific education, a waste so enormous indeed that the born-not-made protest is really human nature's growl at the results. So far as education is specific it must be selective. In ordinary education in the mass, the educator must take all the educands that come along. The nearest equivalent to selection that is available is to be found in school classification, which is really selection with regard to each subject and grade of a subject. At a later stage some indication will be given of the extent to which selection may be profitably carried in the application of specific education,[3] but

[1] "Hard wittes be hard to receiue, but sure to keepe: painefull without werinesse, hedefull without wauering, constant without newfanglenes: bearing heauie things, thoughe not lightlie, yet willinglie; entring hard things, though not easelie, yet deplie; and so cum to that perfitnes of learning in the ende, that quicke wittes, seeme in hope, but do not in deede, or else verie seldome euer attaine vnto." *The Scholemaster*, Arber's reprint, p. 35.

[2] *Institutes*, bk. i. chap. iii. sect. 7.

[3] See page 366.

in the meantime we have to consider an application of specific education that does not go quite so deep as those that we have up till now considered. There is a rather important group of books that deal with the specific education for various walks in life. Some of these are recognised in the ordinary histories of education, others are regarded as belonging rather to the domain of general literature.

Among those usually regarded as definitely educational is Sir Thomas Elyot's *Gouvernour*, which is a systematic account of the considerations that should be kept in view in the training of what it has now become fashionable to call "the governing classes." The education he recommends is specific only to the extent that he deliberately keeps before his mind throughout the share the educand is to bear in the government of the country. The social and political changes of his time made it highly desirable that a new concept of the duty of the governing classes should be cultivated. For the rest, the education he recommends is of a good humanistic type that might well suit any well-to-do private person of his time.

The reader who has been accustomed to see Castiglione's *Il Cortegiano* figuring among the texts dealt with in courses on the history of educational theory, will be surprised when he comes to the actual book to find that it is not professedly educational at all. It is rather the discussion of the qualities and attainments necessary to the perfect courtier than a consideration of how to train him. So far as the work is educational at all it certainly deals with specific education. The reader is left to devise means of attaining a certain ideal, but of the ideal itself there is never any doubt. Curiously enough the most direct educational suggestions in the book are made not in connection with the training of the courtier but with that of the prince.

"The courtier, by the aid of those gentle qualities that Count Ludovico and Messer Frederico have given him, can with ease and should try to gain the good will and so charm the mind of his prince that he shall win free and safe indulgence to speak of everything without being irksome."

And again it is indicated that the true courtier will find it his duty to

"instil goodness into his prince's mind little by little, and to teach continence, fortitude, justice, temperance by giving a taste of how much sweetness is hidden by the little bitterness that at first sight appears to him who withstands vice."[1]

It will be gathered that the usual sinister meaning associated with the word *courtier* does not apply to the ideal set up by Castiglione. He expressly says that the courtier will not stoop to flattery, though of course in unimportant matters he will not go out of his way to disagree with his prince. Specific as is the object of the book, its effect was wider than could be estimated from the number of courts at which it might have been used. It has been pointed out that for one reader who had access to court Castiglione had probably twenty who had not.[2] And yet for them too his teaching, so far as the purpose of the book was didactic at all, was still specific. It gave an insight into the fine manners of the time. These were so exceedingly complicated that there was room for an actual treatise on the subject, and there can be little doubt that the book was largely used for the specific purpose of getting some knowledge of this complicated system. Certain modern novels are sometimes read for the same end, and indeed the *Courtier* combines literary interest with this desirable background of well-informed social tone as satisfactorily as the best novel among them.

Such books as Defoe's *The Complete English Tradesman* and his *Complete Gentleman* belong to the same class as *The Courtier*. They are markedly specific. They take the educand's education up to a certain point for granted, and proceed to build upon that. This is undoubtedly true about such a book as Machiavelli's *Prince*. It may certainly be claimed as a book on education. Yet it takes the prince as it finds him, and were it not that Machiavelli knew

[1] *Il Cortegiano*, bk. iv. § 9 (L. E. Opdycke's translation, 1901).

[2] W. H. Woodward, *Education during the Renaissance*, p. 254.

the actual prince he had in view, his scheme would have been educationally hopeless. It would have come far too late to make any change in character, though it might have led to some changes in conduct.

A very interesting example of this individual specific education is to be found in Xenophon's curious dialogue called *Ischomachus*. The specific object this time is to train a wife. The dialogue between Ischomachus and his young wife is full of concentrated instruction, somewhat after the manner of the immortal Mr. Barlow. But the general effect is one of slightness. There is too much of the "Certainly, Socrates" style of reply. In any case we do not find in the discussion enough to produce the excellent effect we are told it had. It is not technical enough for a special treatise. What has really happened is that the wife had been up till then thoroughly prepared by her ordinary education for her future duties, and this final discourse was merely the bringing to clear consciousness of what had been implicit all along.

Another book that deserves a passing mention as illustrating specific education is Roger Ascham's *Toxophilus*, which is a little treatise on Archery. Here we have a clear educational bias, inasmuch as the art is to be acquired not only for the defence of the state, but also for the better physical development of the persons concerned. The reaction of the moral to the physical is not worked out in detail, but it is quite evident that it was present in the mind of the writer.

General literature supplies many illustrations of specific education. Sometimes we have the fact recognised by the writer himself. Referring again to the case of the poet, we find in *The Prelude* that Wordsworth deliberately deals with the matter in considerable detail. The poet is assumed to have the ordinary education of his time, and the only thing that can mark him off educationally is the way in which either he or some external educator, human or otherwise, gives a specific turn to activities that have been cultivated in the ordinary way. Wordsworth's treat-

ment is very full, though naturally the biographical point of view rather obscures the issues in which we are mainly interested.[1] In Miss May Sinclair's novel named *The Divine Fire* the theme is the freeing of a poet's soul, and the educational element is introduced by the presence of those in the story who take a more or less deliberate share in hastening the process. Wordsworth's poet practically educates himself, using nature as a medium. It is a case of subjective education. The poet is born and makes himself. Miss Sinclair's poet is born, but he needs a deal of making. The moulding force comes partly from without, so we have a case of combined subjective and objective education.

In Painting we have illustrations of the same kind in Sir Hubert von Herkomer's account of his own training. The exercises in visualising recommended by his father,[2] and the practice in different mediums devised by himself in order to give tone to his own sensations,[3] are examples of markedly specific education. Often we find in biographies such statements as So-and-so was being unconsciously educated for this or that post he was afterwards to fill. We have here clear cases of specific education, the implication being that the education is also objective.

Approaching now those writers who deal definitively with the theoretical aspects of education, we find that the natural result of the development of this side is that writers are apt to get farther and farther away from the immediate needs of the educand, as a member of society. It would therefore appear probable that specific education will rather drop out of notice in this connection. The tendency of the educational theorist is to erect for himself a typical educand, and then set about finding the best way to educate him as a mere human being, apart altogether from any consideration of the particular *rôle* that the educand may have to play in life. In actual experience, however, it is

[1] Cf. James Fotheringham: *Wordsworth's 'Prelude' as a Study in Education.*

[2] *The Herkomers*, vol. i. chap. vii. p. 37. [3] *Ibid.* vol. ii. p. 134.

interesting to watch how the specific element obtrudes itself in the writings of men who think that they are dealing with education in the most general way. The fact is that we cannot think of an education *in vacuo*. We have found that an environment is an essential element in education, and an abstract environment is practically a contradiction in terms. It is true that we can imagine an environment quite different from that actually existing, but even in our manipulation of existing environment we are naturally limited to the real elements of which it is composed, however ingenious we may be in manipulating these elements into new combinations. The theorist sets up before him an ideal of pure cultural education, something that will fit a man to fill any post to which he may be called. The object is not to turn out a lawyer, a mechanic, a priest, but a man. Even Rousseau speaks of his Emile as a man. But when we look into the writings of the theorists, it will be found that each of them has in view some more or less definite type of man, and that their theories are directed towards the moulding of the educands on this model. Thus it comes about that pure cultural education is much rarer even in theory than is generally supposed. What could be more broad or liberal than the gorgeous scheme of Milton's ideal school. Yet when we look into his aims we find that what he wanted to produce was a body of country squires who would have all the sturdiness that the commonwealth squires certainly possessed, joined with a culture as profound as would be consistent with the efficient discharge of their duties as officers in the army of the Parliament. There is much significance in his "to perform justly, skilfully and magnanimously all the offices, both private and public, of peace and war."[1] The *Tractate* supplies us with an excellent example of specific education.

It is the same with most of the writers on educational theory. Apparently writing in the most general way, they will be found to have in mind a particular type of educand who is being prepared for a particular kind of environment.

[1] *Tractate on Education.*

In Locke it is the country gentleman who is to be prepared to take his place as the autocrat of an estate, and to sit on the bench as magistrate. Lord Chesterfield had the fine gentleman in view, as had also Montaigne, though it has to be admitted that the Frenchman's was the finer of the two. No visualiser can read Rousseau without making a picture of the finished Emile[1] as a French dandy with sky blue coat, cocked hat, ruffled sleeves, knee-breeches and a ceremonial sword. No doubt Jean Jacques would invite us to make this picture stand for one of nature's gentlemen, but the reader will have his doubts, and will in any case know that Emile is obviously being educated for a very definite rank in society. Pestalozzi again has set before him the ideal of an intelligent and contented peasant, and all his teaching seeks to realise this ideal. Even Herbert Spencer's treatment of education is ultimately specific. It is meant for the offspring of the well-to-do bourgeois who can afford to spend many years over the process.

In the case of the writers just dealt with there can be no doubt that they thought they were dealing with education in a purely general way, and apart from any particular application to a definite walk in life. On the other hand, they are not concerned to keep their theories apart from the work of life. They are quite willing to make references to applications that may afterwards be made of the acquirements that education brings. They have not reached the rarefied atmosphere of those who regard education as something that has to be kept, in the first instance at any rate, free from any connection with the practical affairs of life.

To prevent possible confusion we must distinguish between specific education as we have been here dealing with it and what is in schools technically known as specialisation. Specific education historically precedes while school specialisation historically succeeds the development of the theory of a liberal education. Specific education is

[1] "Je ne serai pas fâché qu'Émile ait de la naissance." *Émile*, bk. i. p. 428 (Ed. Lahure).

the form that naturally appeared as soon as humanity rose to the possibility of passing on its gains from generation to generation. The child was brought up to do what its parents found it necessary for them to do in order to carry on life successfully. With the coming of the conception of a liberal education there was a tendency to a certain rigidity of curriculum because of a natural desire on the part of everyone to insist on having only those elements that were generally recognised as constituting the really free training. No doubt in certain grades of society utilitarians would demand a degree of specific training, but their demands would be opposed by the usual school conventions. Yet when the instrumental view of knowledge began to gain ground there would be room for a certain loosening of the rigidity of the liberal education curriculum. If definite branches of learning could be set apart for the training of certain qualities of the mind, the idea would naturally spread that a complete education could be obtained by a judicious selection among the subjects available in the regular school course. The educational convention would not in this instance be in opposition, since the notion of the instrumental use of knowledge originated within the profession itself, and could therefore be cordially accepted by the profession. Besides, it did not work in the direction of introducing new elements into the curriculum, but only in manipulating elements already there.

It is in this manipulation that school specialisation consists. As at present applied it may or may not have a reference to the future life of the educand; for there are really two kinds of specialisation carried on, the one at short range, the other at long. Short range specialisation does not extend beyond the purely educational period. Its purpose may be to lead to a wider generalisation through a temporary restriction. A pupil may be made to specialise in one or maybe two subjects, in order to win a scholarship that will enable him to take a full course at the university. Long range specialisation, on the other hand, aims at an effect on the after life of the educand: but even here it does

not necessarily coincide with what we have called specific education. For there are two kinds of long range specialisation, the purely scholastic and the practical. Scholastic specialisation may have the effect of securing the admission of the leaving pupil into some particular walk in life without directly preparing him for that walk. If a candidate for the Indian Civil Service specialises in Mathematics and the natural and physical sciences in order that he may pass an examination that will secure for him the post of an administrator of law in India, he is certainly not following the lines of specific education. The only thing that could justify his course would be a complete demonstration of the truth of the doctrine of formal training, a demonstration that, as will be seen in our next chapter, is not likely to be forthcoming. On the other hand, if pupils specialise in modern languages because they intend to go into commerce, or in certain physical sciences because they intend to take up certain kinds of manufacturing work, we have specialisation that is to a certain extent specific. It does not follow that the education that includes his specialisation must of necessity tend towards the vocational. No doubt the tendency is in many directions at present in favour of an *ad hoc* preparation for a particular walk in life. But there are still many who refuse to countenance this tendency, and their resistance takes the form of this long range specialisation that leads to qualifications that may afterwards be directed to specific ends, but that at present, so far as the policy of the educator is concerned, may be treated as purely of general interest and cultural effect. Only in so far as such an education is a necessary preparation for the educand to take his place easily in a given social circle can it be regarded as directly specific.

We come now to that form of specific education that it has of late become customary to call vocational. Formerly when we wished to speak of the direct preparation in school for the future life-work of the pupil we spoke of technical education, and the word is frequently used still in this connection. But certain special elements have added them-

selves to the connotation of the word. It conveys the idea of something rather complicated and with machinery in it, whereas we want a word that will cover whatever is to be the means of livelihood of the pupil when he leaves school. There is the further complication with the word *technology* which concerns rather the special arts and sciences that are to be applied in any particular τέχνη. Thus distinguished, technical education means the actual preparation for a particular trade, whereas a technological education would mean the study of the special arts and sciences (in their strictly practical aspects) that are necessary to the successful and intelligent practice of a particular trade. A technical training in dyeing means that in the dyeing school the pupil learns the principles of dyeing and their direct application. He learns by doing, but he gets the principles as well. In a technological training in dyeing, the course would include in addition courses in those parts of chemistry, natural history, physics (including optics) and whatever other branches of knowledge are found to have a direct bearing upon the scientific conduct of the process of dyeing.

Vocational education is thus a wider term, and includes the other two. It simply means whatever gives direct preparation for the occupation the educand is to follow for a living after leaving school. It thus comes back to within reasonable distance of the general term "specific education" with which this chapter started, and which may be regarded as the widest term that can be applied to a form of education that prepares for a definite walk in life. It is only when the vocations to which an educand may apply himself increase in number and complexity that there is need to classify them, and allocate to each educand his special vocation before he leaves school.

To remove a possibility of confusion between the cultural and the vocational, it may be well to consider what is the relation between such things as oratory, poetry and painting on the one hand, and such things as weaving, carpentry and engineering on the other. At first we are inclined to think that the difference in the groups is a matter

of special ability. Everybody can be a carpenter if he cares to, but only very few can hope for success in poetry. But this distinction is insufficient, for it may be shown that there is a more or less regular gradation in the difficulty of meeting the initial requirements in all the vocations from the top to the bottom,—from writing epics to handling pig-iron.

The *differentia* must be sought elsewhere, and it is probable that it will be found in the relation between the whole of life and that portion that must be devoted to the earning of a living. If specific education is to justify its name it must include all the activities for which direct preparation can be made. It thus includes the whole of the life-work for which the educand is being prepared, social as well as vocational. Throughout this chapter little has been said of the other kind of education that is included under the same category as specific education, the category of future reference. *General* education, as the name implies, prepares the educand for life in general, without consideration of any clearly marked-out kind or part of life. But we found as we went on an increasing difficulty in keeping the specific and the general apart from each other. At the earliest stages the general was practically included in the specific. Education was not analysed: its theory had not yet been evolved. When it came to be needful to consider the case of such persons as the ruler, the priest, the orator, theory of necessity made its appearance. But in the case of such vocations life was so full that the general swamped the particular, or, if it is preferred, the particular swamped the general. If a man were well educated as prophet, priest or king all his nature was concerned, and there was no room for an antagonism between the different elements. General and specific education coalesced. To be a good orator or poet takes as much out of a man as he is able to give, so long as he has free play for his energies in poetry or in oratory.

But with the growing complexity of human life there arose greater and greater need for specialisation, and much

of the work that was thus set apart for certain groups of workers was in itself distasteful, and did not satisfy the demands of the whole nature of the persons who had to do it. The educand had to get a preparation for his vocational work, but also for the rest of his time. Both specific and general education were necessary, and were found as a rule in the education of mere living. No doubt there were certain favoured classes that had the benefit of an education deliberately given to meet purely general needs; but the common people had to make shift with what education they could find for themselves.

It was, however, in historical times and within the ranks of the educators themselves that a curious change took place in the meaning of what we have called general education. Instead of being applied to a preparation for life in general as opposed to a preparation for some particular walk in life, it began to be regarded as a preparation not for actual life at all, but as the preparation for a sort of potential life. Man was to be so trained that he became fitted not for this or that sphere in life, however wide or satisfying, but for any possible sphere that might claim him.

This is not such an unreasonable change in the point of view as it at first sight appears, since we have seen that vocational education is only a *part* of specific education. If the educand is to be prepared for his vocation and also for a general scheme of life which transcends but includes his vocation, he is still within the region of the specific. Accordingly even what is known as a liberal education may not unfairly be included as a form of specific education. Whatever the actual subjects studied, whether the original seven liberal arts of the *trivium* and *quadrivium*, or their modern equivalents, the result sought is the same—the fitting of the educand to take his place and hold his own in a particular set of circumstances. The twenty thousand cultured Athenian citizens of the time of Socrates were as specifically prepared for their life-work of cultured leisure as were the swarming slaves for their less happy lot. All the Athenian gentlemen went through the same educational

course, which was indeed general enough to meet the views of the most fastidious. There was no need for them to specialise though their education was specific. Among the slaves it was different: specialisation in their case was absolutely essential to produce the degree of skill required of them in their functions. Judged by modern standards it was not the nature of the subjects he studied that made the Greek gentleman's education liberal. Painters, sculptors, musicians now claim to be regarded as men of culture in virtue of their art, and have their claim recognised. In old Athens the most skilled of these artists were slaves. Relatively then, the slave had a specialised education, and the gentleman a general. But when the various groups of cultured people of Europe came to be differentiated from each other, the preparation for life in any one of them became strictly speaking specific. The finished courtier that Castiglione describes was no doubt free of all the great courts of Europe, but he would have cut a less creditable figure in the circle of scholars at a University. It was the increase in the number of spheres in which a man could claim to be generally educated without reference to the standard curriculum of the schools, that led to the development of a new opposite to specific education, an education that was not intended to prepare a man for this, that or the other sphere, however wide, but just to enable him to become a complete all round man, a man who was not educated for this or that, but who was just educated, that and nothing more.

There is involved here a confusion between two of the categories of education. This new conception of education that we have now reached is really that of formal education, which is usually opposed to material education. Formal education in distinction from material has for its aim the training of the mind as opposed to the storing of the mind with useful knowledge. But there is not here a real opposition. It is quite possible for a theory of education to maintain that both purposes may be served at the same time, that education may be at once formal and material.

Specific education is the real antithesis to formal. In both cases the term *training* may be substituted for the term *education*, a change that makes for greater accuracy. We have seen that the term "formal education" is sometimes used in the natural sense of such deliberate systematic education as is given in a school or by an official educator, as opposed to the ordinary education of living in an environment. But because of the elaboration of the disciplinary theory in schools the term is sometimes used as an equivalent to what is more correctly described as *formal training* or *formal discipline*. The doctrine indicated by these terms is of fundamental importance in the evolution of educational theory, so it is quite essential to have a term to indicate as nearly as possible its direct opposite, and in the term *specific training* we have exactly what we need. In specific training there is a distinct reference throughout the whole process to the circumstances under which the results of the training are to be applied. Knowledge of a particular kind and quality has to be acquired so as to dovetail exactly into circumstances that are known beforehand in as great detail as the case demands. In formal training the knowledge with which the educator works is not in itself of any consequence, the result in training is the only thing that matters, and this result is to be of such a general nature that it can be applied in any circumstances in which the educand may find himself. The whole question of formal training will be treated in the following chapter, but it was necessary to begin with specific training as it makes in any case an earlier appearance in the evolution of educational theory, and must be considered before we can properly understand the origin and decay of the opposed doctrine.

CHAPTER VII

THE EDUCATIONAL ORGANON

"Education is the science of human development, in so far as that development is purposely determined by the systematic imparting of knowledge."[1]

This definition claims to represent the purely scientific view of education, and may, as a matter of fact, be fairly taken to represent a point of view that is very widely accepted, since it embodies that identification of the teacher and the educator that we have seen is exceedingly common. Knowledge is recognised to be the organon of education.

While it is strongly impressed on the mind of the plain man that the communication of knowledge in some form or other is of the essence of education, there is much uncertainty about the function of knowledge in the educative process. Popular views on the subject range between two extremes. On the one hand it is maintained that knowledge is of value in itself, that it is something worth acquiring for its own sake, that it is the food of the mind. This may be called the nurture theory. On the other hand, it may be contended that knowledge is of value mainly as a means towards an end, that it is in fact an organon, an instrument. By using knowledge in a certain way we may modify the nature of the educand. Knowledge is the educator's tool. This may be called the disciplinary theory. We have seen that these two points of view are to be reckoned with in any treatment of specific education. At the present day there are few

[1] H. Holman : *An Introduction to Education*, p. 20.

writers who would be willing to commit themselves wholeheartedly to either of the two theories in its extreme form. Most of us have a more or less strong bias one way or the other, but are willing to admit that truth must be sought in a co-ordination of the two views.

The nurture theory is the simpler and the more natural, and is accordingly found at the earlier stages. In philosophical discussions it is taken for granted that knowledge is of fundamental importance. Epistemology concerns itself mainly with the possibility of knowledge, the relativity of knowledge, the process of acquiring knowledge: but underlying all its problems is the assumption that knowledge is of supreme importance. This may be maintained in spite of the fact that Epistemology, as distinguished from Logic on the one hand and Philosophy on the other, is not at present in the best repute. Abstract as may appear the epistemological discussions, it is easy to see how exceedingly practical are the issues involved. The fundamental problem of epistemology is the relation between the ego and the non-ego, between the subjective and the objective, between the inner and the outer world. Expressed in educational terms this resolves itself into the problem of the relation between the educator and his environment. Education is now coming to be regarded as the process by which the educand is helped to make himself at home in his surroundings. Education as adjustment is getting to be recognised as an important educational category. It must not, however, be interpreted to mean that the function of the educator is to help the educand merely to fit himself into his surroundings. No one ever wants to fit himself into his environment. It is the instrument—to be understood of course—but the educand is the end. Educationally, the truer aim is to enable the educand to modify his environment. The thing that best fits itself into its environment is something that has lost its power, say a rotting tree. The living tree resists, manipulates, and in certain directions thoroughly converts the environment. It is true that in certain other

directions the tree and the educand must yield to circumstances, but there should be no surrender till the educand has done his utmost—guided by an intelligent knowledge of possibilities—to assert himself. It may be said that after all the goal is a harmony between the educand and his environment, and that it does not matter very much whether we say that we should help the educand to fit himself into his environment or help him to fit the environment to himself. But it is of importance both philosophically and practically through which end of the telescope we look at the problem. The view that regards the ego as a fighting force implies that education is a process of acquiring freedom—the freedom of helpful service it may be, but still freedom. The other view implicitly denies freedom, even though we recognise God as our ultimate environment.[1]

In any case it is obvious that an important part of the work of education must be to make the educand aware of the nature of his environment. Clearly it is not a matter of mere information. Knowledge according to the nurture theory is valuable for its own sake, when it is valuable at all. But there are many pieces of information about the environment that are in themselves worthless. The knowledge that counts, the knowledge that is power, is not mere acquaintance with facts, but experience of facts in their relation to each other. True knowledge must consist of significant facts, facts that mean something to the knower, and can be applied by him in some way advantageous to himself or to others.

So far from being a matter of indifference, the kind of knowledge supplied to the educand is of the first importance in determining the sort of being into which he will develop. When the plain man speaks depreciatingly, as he sometimes does, of "mere knowledge," his attitude arises from the ordinary dualistic view that is so attractive to the practical person. The figure of the container and

[1] For a treatment that is not based on the above principles, but is not inconsistent with them, see Prof. O'Shea's *Education as Adjustment*.

the thing contained is at the bottom of the ordinary conception of the process of imparting knowledge. There is the soul ready to receive, and the knowledge ready to be imparted. The work of the educator is assumed to be to select suitable morsels and feed them in at appropriate times. It goes without saying that knowledge is never communicated in this way. Even in the worst form of cram the materials of knowledge are worked up, to some extent at least, by the apperceiving mind, though it is true that the results are sometimes deplorably bad. Information acquired without being assimilated is worse than useless, since it is not only incapable of practical application, but takes up the room of better material. Its presence weakens the potentiality of the soul. True knowledge, on the other hand, is what becomes a part of the soul that assimilates it, and strengthens that soul. It is not so much that the truly educated soul has certain portions of knowledge, as that it *is* those portions: they become of its very essence.

The natural outcome of this view of knowledge is that the educator must see to it that there is a careful censorship maintained regarding the supply of knowledge to the educand. The human being's powers of assimilating knowledge being ludicrously inadequate in view of the vast domain that is available, it is obviously necessary to limit the range. In this process, however, there is danger of introducing scrappiness. On what principle are we to decide what is to be taken and what left? So fundamental is this problem that certain educators have set about developing a complete scheme of education the main function of which is to maintain the unity of mental life, and obviate the danger of a completed scheme resulting in a thing of shreds and patches. Those who adopt this ideal of what they call *Integral* Education fall back upon the authority of Descartes and Comte. Since these two philosophers have been driven by their investigations

"to proclaim the unity of intelligence and the unity of knowledge it will be almost demonstrated that all true instruction (*enseignement*)

must be integral, and that we ought to abstain from dividing and parcelling out (*morceler*) what nature has made one and indivisible."[1]

Integral Education should thus be marked by unity of aim or purpose, and should be coherent in all its parts taken together, and in each of the parts taken separately. Its ideal would be a knowledge that is universal in its content and universal in its application; that is to say, it should include all knowledge, and this knowledge should be so communicated that it makes the same appeal to all minds. It must be universal in the full sense of that term.

Jules Simon professes to be unable to understand what integral education is unless it means the possession of all human knowledge distributed among all men and all women without exception. To this Bertrand replies in Chapter II. of his *L'Enseignement Intégral*, the summary being as follows:

"Integral education is neither an intensive and encyclopaedic culture, nor an artificial selection of minds and a drainage of the intellectual capital of a country, but the methodical development of all the powers or faculties of the human soul by means of the universality of the sciences, classified and arranged in a hierarchy in view of their didactic use."

Elsewhere in a more epigrammatic way he tells us that perhaps the best description of integral education may be found in the following:

"No moral regeneration without an energetic education concerning itself at the same time with the whole of man and with the whole of the people."[2]

Considering first the matter to be learned, the mass of knowledge that can be actually acquired, we find that the integral-education people are very ready to admit the impossibility of carrying away the whole, and one of them hits upon the following ingenious plan of discovering the elements that really ought to be selected for the permanent equipment of his pupils. After enumerating the enormous

[1] A. Bertrand: *L'Enseignement Intégral*, p. 53.

[2] *Op. cit.* p. 2.

amount of scientific and literary knowledge to be found in the text-books used by the ordinary pupils in a secondary school, Marcel Prévost goes on to say:

"Even when intelligent and industrious the pupil can retain of all this scientific litter only an infinitely small residue composed of disparate elements. . . . Is it not more logical to make up *beforehand* this residue of essential elements, well correlated together, and to stick to that?"[1]

This is quoted by a recent French writer[2] who is so pleased with it that he adds at once:

"Assuredly, and such is the exact formula of integral education: this education does not pursue the chimaera of a complete knowledge of the infinite details of things, nor even of a single thing, but the reality of a knowledge wide in its object, precise in its form, well organised and complete, allowing only the restrictions which the natural limits of our intellect and the relative importance of things to be studied impose."

Does not this show a lamentable misunderstanding of the process of learning? Its author appears to believe that the pupil need study only the matter that is afterwards to be retained. He does not realise that in order to retain certain important elements it is necessary to study them in all their connections. It is here that we find the distinction between the crammer and the true teacher. In cram it is enough to get a temporary grip of certain facts: there is no need for a sound foundation. The crammer knows exactly how much knowledge is required for a particular occasion, and he sees that it is on hand at the time appointed. He is not concerned with what residue there will be a month afterwards—but the integralist is: it is of the very essence of his bond. In order that we may honestly understand and permanently retain a given minimum of really valuable matter, we must have worked our way through a great mass of details that may not be worth while retaining as a permanent possession. Perhaps

[1] *Lettres à Françoise IX.* (Italics mine.)

[2] L. Dugas: *Le Problème de l'Éducation*, p. 303.

the *fatras scientifique* that Prévost despises may not be the best preparation for the residue that actually remains, after the French secondary course, and it is the business of the educator to discover the minimum amount of subsidiary matter that will meet his purpose. But some subsidiary matter there must be. Mere excision of the apparently unnecessary is too naive a method. There is absolute need for mental connective tissue.

The integralists come, therefore, as most educational theorists come sooner or later, to make their demands for a reformed curriculum ; and accordingly their general scheme loses a good deal of its glamour. Bertrand is full of sarcasm for *le Système Fortoul* which in the first years of the Second Empire caused a bifurcation between the literary and the scientific :

> " The young people set out together, then in the middle of the voyage were separated into two bands ; one of the flocks received literary nourishment, the other scientific pasturage." [1]

Bertrand's sneers about bicephalism, especially in Germany, bring us back to the second aspect of integral education. There is much more hope of integration when we consider the matter from the standpoint of mind. About the unity of the soul there is no doubt, and this unity imposes itself necessarily on the material it assimilates. But unless it is guided in its assimilation it will form unifications that are valid only for itself, and that do not correspond to the unifications of others. So that ultimately the integralists have to confine themselves mainly to the selection of matter to be presented. It is their duty in short to see that the unifications of science and philosophy have their due effect in determining the order in which facts are presented for the building up of the inner world. A considerable saving in presentation may thus be effected if Descartes is to be believed :

[1] *L'Enseignement Intégral*, p. 55. From Bertrand's point of view the recent change in the French curriculum, with its *fourfold* choice, must be regarded as retrograde. The change is a movement in favour of specific education.

"We must be persuaded that all the sciences are so closely correlated that it is more easy to learn them all at the same time than to detach one of them from the others. If then one wishes to seek the truth seriously, one must not apply oneself to one science alone; they are all bound together and mutually depend on one another."[1]

One wonders whether M. Dugas, who quotes this passage, would hold it still applicable in the present state of division of labour in the sciences. His reply would probably be that this is one of the very points in which the integralists will prove useful. Though they have in the past contented themselves practically with the Comtian classification of the sciences, their main function must now be to select the really important common elements in all branches of knowledge, not in order that the mind may be trained in this direction or in that—even at the time of Madame de Stael it was known that: "we follow a false system of education when we want to develop exclusively this or that quality of the mind"—but in order to secure for the educand such a selection of the available knowledge as shall enable him to feel at home in his environment.

The integralists have served a very useful purpose by emphasising the need of a unifying principle in education. This need is admirably expressed in his "*Une Éducation Manquée* by Ernest Lavisse as his contribution to *L'Éducation de la Démocratie*. He makes a dramatic presentation of the well-known fact that pupils usually do each part of their work without troubling themselves about its relation to the rest, and blames the divided interests of pupil and master caused by the system in vogue, by which it is "un fragment d'éducateur qui s'adresse à un fragment d'écolier." He goes on to say:

"The pupil has too good an excuse for not discovering the complete or ultimate object (*l'objet total*), and the intention of his education, since the masters themselves do not know them, or at the very least do not concern themselves with them. We shall be

[1] *Règles pour la direction de l'esprit*, i.

educators the day on which, each of us having before the mind the whole successive development of the pupil, we shall be all and each so to speak the same master, the perpetual master of that pupil." [1]

True integral education therefore implies three unifications: a unification of the subject matter of the educational course; a unification of the activities of the various modes of being conscious, or of what are usually called the powers of the mind or soul; and a unification of the forces of our educational institutions. Of these the easiest is the middle one, for there we have an organic unity to begin with. Instead of having to build up a unity we have merely to take care that a given unity is not broken up. It will be found that underlying a good deal of the writing of the integralists there is really implied the theory that the soul can be specifically affected by different influences in different ways. The dynamic power of knowledge is recognised. So we are naturally led to an enquiry into the nature of knowledge and its use in education.

The view of the plain man is that the soul as one independent entity approaches the world as another independent entity, and gathers from that world certain facts that are found to be useful. The facts existed before outside of the soul, and the process of knowledge is the process of seeking out those facts and taking possession of them. The idealistic view is that soul and outer world are parts of one great spiritual system that act and react upon each other while functioning naturally within this system in such a way that as a result of this interaction an organised content is built up within and forms a part of the soul.

This organised system of experience that is thus developed within the soul very naturally finds itself in accord with the outer world, since after all it is nothing

[1] *L'Éducation de la Démocratie*, p. 30. It is perhaps only fair to add that Monsieur Lavisse gives no evidence of being technically an integralist; that is, he does not appear to belong specifically to the school that deliberately follows Comte and founds on Descartes. He seems to have reached his conclusions by personal observation and reflection.

but the resultant of the interaction between soul and world. The reactions in the individual experience are represented by ideas, and these ideas form a part of the soul. They build up within the soul a sort of internal world that corresponds to the outer world, in such a way that the interactions among the ideas have a practical bearing upon our relations with the outer world. Our ideas enable us to behave satisfactorily in relation to our environment. As Herbert Spencer puts it: "Knowledge is turned into faculty as soon as it is taken in, and forthwith aids in the general function of thinking."[1]

The statement "fact becomes faculty" rouses opposition as soon as it is made: and from this very circumstance it becomes clear that there is something very crude in the relation generally assumed to exist between the soul and the outer world. What is called a fact is supposed to have to do with the external world: a faculty is a property of the soul. How can the one be transformed into the other? Does it not look as if the immaterial soul were called upon to assimilate the material world? But the world *as we know it* is no more material than the soul. On the idealistic basis, therefore, there is nothing inconsistent in saying that soul development does consist in the assimilation of the external world; but of course there is nothing material about the assimilation. It has to be remembered that ideas are not themselves material. They have not even an independent existence: they are merely the soul's special form of reaction in face of certain stimuli. So far from there being any inconsistency between soul content thus conceived and what is called faculty, there is really identity. An idea is practically the soul's power of dealing with a certain element or set of elements of the external or internal world. From this point of view it is manifestly possible to impart faculty to the soul, inasmuch as every group of experiences that are correlated to a constant reaction from the external world, will result in a more or less firmly established tendency to react in the appropriate

[1] *Education* (edition 1879), p. 90.

way. This is no reintroduction, under another form, of a hypostatised set of faculties. No separate existence is claimed for those powers of meeting constant stimuli by suitable reactions. Ideas as dynamic faculties are in no sense innate, though the power to form them must be assumed to form part of the inherent quality of the organism in connection with which they are developed. The inner and the outer each finds its account in the system of ideas which results from the interaction between the soul and its environment. Soul content is no longer mere content, but is suffused with activity, and forms a part of the organism of which the undeveloped soul is the first stage. Indeed it becomes improper to use the term "soul content," since it really suggests the very conception against which we are continually warning ourselves. "Soul content" merely represents that aspect of the soul that at any given moment occupies the objective pole of the soul activity. It is when ideas are at the subjective pole that they are really faculty.

There is no doubt an apparent incongruity in maintaining that our ideas of such things as dogs, and grooms and beds should become faculty. But if we are different potentialities than we were before because of our mastery of those ideas, may we not fairly say that this knowledge has become power? The system of ideas that makes up the soul at any given stage of development does certainly correspond to the system of things found in the external world upon which the soul has reacted. This means no more than that the soul in its reaction upon the external world has produced as the result of its processes an experience in which the inner and the outer worlds lose themselves in each other and form an organic whole. However abstract an idea may be, its development, if not its ultimate origin, may be traced to some form of direct or indirect interaction between the inner world and the outer.

The idea of the two worlds is useful as an expository device, but it has its dangers. We must not allow it to lead us to the dualistic conception of two worlds existing

outside of and independent of each other. There is ultimately but one world, of which the self is the organ. As Edward Caird used to express it: "The world comes to self-consciousness in man." The tendency to dualism is well illustrated in the very common tendency to regard the two worlds as in some way resembling each other. University students of philosophy not infrequently get the impression that the inner world is a somewhat shadowy reproduction of the outer. But there is not the slightest need to assume a resemblance between the two. All that is required is that the two worlds shall correspond to each other in such a way that the results of interaction between them are constant. A system of potential constant reactions to a correspondingly organised system of constant stimuli is all that is necessary. My idea of a clock may be caused by something that in no way resembles the clock as it appears to my senses. It is enough that my idea of clock enables me to act intelligently in dealing with clocks as I find them in real life, and as I discuss them with my fellows. The real clock, the pattern that is laid up in the Platonic heaven, may be unknown to me, but it is equally unknown to my fellows, whose views of it, all the same, agree with mine sufficiently to allow of us acting intelligently in our intercourse, so far as clocks are concerned. The clock-an-sich is of interest to us only in so far as it forms an invisible and invariable third between our idea of a clock, and that of our fellows.

This way of regarding the process of knowledge may be illustrated by the newer way of treating the concept. Hitherto the custom has been to deal with it as the product of the activity of the soul, and as something that the soul has stored up for future reference. Our ideas were therefore regarded as static products, kept in readiness to be acted upon by the soul that had originally formed them. The test of the true possession of an idea was the power to reproduce it when the occasion arose. In teaching, this reproduction usually took the form of definition. The pupil was admitted to have mastered an idea when he could

define it. But experience shows us that we have many concepts that we cannot define, and yet we can use in the most satisfactory way. How many people can accurately define a dog? Yet we all use the word *dog* in an easy and intelligent way. The test indeed is not mainly a matter of knowing but of acting. The question is not: Can you define a dog? but: Can you behave intelligently when you are brought into relation with dogs? To be sure we must be careful not to separate knowing and acting. Acting is after all a kind of experiment, and therefore implies knowledge. It is not the action of a machine.

The young child's favourite form of definition embodies the newer view. He always wishes to define a term by saying what the function of the thing defined is. Asked what grass is, the child will very probably reply that it is what cows live on. This it certainly is. It is also something to lie on, something to beautify the landscape, something for grasshoppers to hide in. When the botanist has come along and uttered his big words, he feels that he has settled exactly what grass is. But it is no more what he calls it than it is what the child calls it. Botany has no prescriptive right to grass. An island is certainly a piece of land wholly surrounded by water, but it is much more than that. It has to be noted, of course, that the logical definition is as real as any other, so long as it is kept to the realm of logic.

The fallacy that confounds knowledge with mere information cannot be an early one in the evolution of educational theory. Its natural place is midway between the extreme nurture theory and the extreme disciplinary; for in actual experience it is found that information as an educational organon owes its importance to a vague feeling of disciplinary value along with a firm conviction of intrinsic value. In the case of Comenius, with his pictured world of the things of sense and his various vocabularies, we have knowledge raised to a position of importance that was more seeming than real. The pansophic ideal no doubt in theory set knowledge on a pinnacle, but practically exhausted itself in linguistic. Realist as he was, Com-

enius in his actual schoolbooks seemed content with a knowledge that enabled his pupils to name the various objects that made up the content of their experience, or rather the experience of their teachers. In the various ideal schools that he describes, there is no doubt a very important place for knowledge, but this knowledge seems to be valued for its own sake: there is no suggestion that it is being used as an organon for some general educational purpose.

It is when the real importance of knowledge has been fully appreciated that there is danger of the information fallacy, which after all owes its origin to the mistaken direction of a natural admiration of knowledge. The fallacy is seen in its most marked form in the first half of the nineteenth century when the claims of popular education were first put prominently forward. Humanity was to be regenerated by the spread of general information. There was supposed to be a refining influence in the mere mastering of facts. It is true that there was sometimes an attempt to discriminate among the various kinds of facts. Thus the Society for Promoting Christian Knowledge (which, however, dates from the eighteenth century), clearly differentiated between facts that were and facts that were not conducive to a particular result. But the great body of opinion in England in the early nineteenth century inclined to value all facts as educational forces. In 1827 was founded the Society for the Diffusion of Useful Knowledge. It is true that F. D. Maurice in his *Lecture on National Education* asks very pertinently: Useful for What? But most people did not trouble to seek an answer. The ample page of knowledge was supposed in some vague way to improve the nature of men. *Chambers's Information for the People*, an excellent book in its way, became typical of the sort of thing that philanthropists expected to revolutionise popular character. The schoolbooks of the time became slightly encyclopaedic in their efforts to impart useful knowledge. Such questions as "How does a candle burn?" were treated as of the gravest

importance; and there was the underlying assumption that people who knew how candles burned, why balloons ascended, and what chalk was made of, would be more refined and of better character than those who remained in dull ignorance of these facts.

It is clear that we have here a vague and inarticulate form of the disciplinary view. So far, however, as the purpose of educational theorists was to impart information that is of value in itself in the way of helping the educands to be more useful members of society, the stress is laid on the value of knowledge as such, and the nurture theory becomes prominent. There is no doubt that, chronologically, the nurture view preceded the disciplinary. At the earliest stages of educational theory knowledge was regarded and rightly regarded as of value in and for itself. In order that the human being should conduct himself wisely in his environment he had to bring it into an appropriate relation to himself. Nature saw to it that certain fundamental principles forced themselves upon all, and the early educators soon perceived the need to supplement the work of nature by communicating certain pieces of knowledge that no human being could lack without suffering for it.

The individual and the social aspects of education may be combined in the definition based on what was said in Chapter II.: the process by which the individual absorbs and is absorbed by his environment. The first part of this definition expresses the earlier view of the educational function of knowledge. It corresponds to the process that we have seen was described by Herbert Spencer as turning fact into faculty. Among the innumerable facts available to the educand it is necessary to select some that have a direct bearing upon his activities. These facts he takes in and practically incorporates. They become parts of his very being. He would be a different person if these facts had not been assimilated. Such knowledge obviously does change the nature of the educand, but not by acting upon it more or less from without. Knowledge does not here

act as an organon or instrument, but as material to aid in the building up of a character. It is a matter of nurture rather than of moulding. The nature of the subject-matter of instruction has therefore the chief importance. It makes a great deal of difference which facts are selected for presentation to the educand. He may be full of knowledge about certain matters that are of very little help to him in his reaction on his environment. This does not mean that these facts have not been properly assimilated, or that his character is not modified accordingly, but only that he has been fed with the wrong sort of facts. A man may be filled up with genealogies and Greek particles, and be quite unfit to cope with the ordinary situations of life. His recondite knowledge has not failed to become a part of himself. His weird facts have not missed turning themselves into faculty: the trouble is that this faculty does not happen to be just what is wanted to enable the educand to meet his responsibilities in life.

So also at the earliest stages of education. Children are taught how to do certain things. The educator, before the stage at which schools are introduced, is not concerned that the educand should know anything for the sake of knowing it, but only in order that immediate application may be made of the knowledge. Not to *know about* but to *know how to* is the important matter at the earlier periods. *Faber fabricando* is the educator's motto at this stage. He does not, it is true, analyse his principles, but he is clearly acting on the distinction between mere instruction, and what is usually called *training*. Skill takes precedence of knowledge. The evolution of educational theory may not unfairly be said to centre round this distinction between knowledge and skill.

Training in some form or other is implied in all systems of educational theory. We have seen that it is a cross classification to introduce a certain school of educational theorists as "trainers," for every system of education claims to train. Yet the classification has at least the justification that at a certain stage Training as opposed to

Instruction was raised to the dignity of deliberate self-consciousness. In the early part of the nineteenth century David Stow elaborated the idea of training and founded what he specifically termed The Training System. His work certainly marks an important stage in the development of theory, but we must not lose sight of the fact that training formed the basis of the earliest kinds of education. Stow himself categorically traces back his theory at least as far as the Bible. *Proverbs* xxii. 6, supplied him with the motto that he had blazoned on the walls of his college, and he lost no opportunity of telling his students: "Train up a child in the way he should go; and when he is old, he will not depart from it."

Old as is the idea of training there was yet virtue in Stow's work. It had a great influence. It modified educational practice. Yet the service he rendered was not in inventing or discovering training, but in separating the theory of training from certain excrescences that had gathered round it. Every new theory of education may in fact be sooner or later reduced to an attempt to keep the theory of training free from unwarranted assumptions.

So much has been written about training that it has at last attained to a sort of sacred meaninglessness. In the last resort it amounts to no more than the view that the educand has certain capacities for acting in certain ways, and that these capacities can be actualised by properly regulated practice. Its application is best seen in physical activities. Here the educator can by example or by actual physical force cause the educand to perform a certain action, and the action once performed there is little difficulty in securing its repetition. A dog can be trained to pretend to smoke a pipe by having the pipe placed between his jaws. It is the first action that causes serious trouble: all the rest is a matter of biscuits and blows.

It is because of this physical bias that the term has been so generally restricted to animals—training for horses and dogs, education for human beings. It is sometimes said

that animals cannot be educated, they can only be trained.[1] The phrase "an educated pig" owes its piquancy to the generally received distinction.

It is true that even with human beings the term *training* was originally used with regard to the more athletic forms of education. If there were tutors for the schools there were trainers for the river. Besides, apart from the term, the idea of training has always been present in educational theory, and the influence of the theory of physical training has greatly affected the general view of training in education.

At first all training had a specific object. The apprentice blacksmith practised himself in the use of the hammer in the process of becoming a blacksmith. As only men of good physique would be attracted by or could succeed in this trade, the journeyman blacksmith was usually a man of great strength; and in fact the blacksmith came to be regarded as the typically strong man. It would be natural then for a parent at a time when physical strength was held in the highest esteem to look with envy at the blacksmith, and feel tempted to train up his boy to that trade, so as to ensure the development of the coveted strength. But there would be seen to be obvious disadvantages. Certain roughnesses are necessarily acquired along with the strength. The manual labourer frequently develops a distorted body. The broad thumb of certain craftsmen, the over-developed right biceps, the one shoulder higher than the other, are all prices paid for the acquiring of special kinds of power. If the work on which the artisan was engaged could have been properly arranged, this disproportionate development would not have taken place. Accordingly, if general all round development be desired rather than the acquiring of a special kind of power, it is clear that we should not depend on the haphazard training of a trade that has for its end the production of certain external results, quite irrespective of the development of the person who has to produce them. It is felt that the

[1] Chr. Ufer: *Introduction to the Pedagogy of Herbart*, Introduction.

muscles of the body can be trained without reference to the particular kind of work to which they are set. The biceps can be developed at the anvil, but also in the boat and at the wicket. The natural application is the selection of certain forms of activity that exercise precisely the muscles that most need development, and yet do not interfere with other muscles. We thus come to the conception of gymnastics, or generalised physical training. Gymnastics in fact correspond on the physical side to what is often understood by a liberal education on the intellectual. Each is free from the taint of the useful in the narrower sense of that term. The one trains the muscles in general, the other the mind in general. In both cases the ideal is the harmonious development of all the elements involved. In a highly organised system of gymnastics there is an exercise for almost every muscle in the body. The instructor deliberately lays himself out to invent special movements to bring into play every set of muscles in its turn, and to give to each set that amount of exercise that its importance in the general working of the body determines.

Scientific gymnastics of this kind must be discriminated from free games on the one hand and drill on the other. In the ordinary natural games of young people most of the muscles are called into play, though not in the deliberately co-ordinated way of the fixed systems. In drill, on the other hand, the ideal is somewhat different. It seeks to impose on the subjects a certain co-ordinated set of activities that are of value not so much to the person drilled as to the purpose for which he is drilled. In the ordinary training for the army there is a combination of drill and gymnastics, the drill being for the concerted activities of the recruits, gymnastics for their individual development.

It is not questioned that in what may be called analytical gymnastics it is possible to cultivate each of the muscular units. All the elements of the human machine are duly exercised and thus helped to develop, and it is assumed that being thus trained the muscles can be applied to any

kind of work that the body may demand of them. The combined action of the various muscles is left for a later form of training. There is here introduced a generalising element of the utmost importance in the theory of education. The argument is that power gained in gymnastics may be applied in any other form of physical activity. The body is held to be trained in general, to be cultivated, in fact, so that its power may be applied effectively in any direction. The biceps developed by means of dumb-bells may be used with equal efficacy at the oar and at the anvil. Yet experience shows that after allowance is made for individual endowment there is a difference in the effective work, in specific directions, of persons who have had the same amount of what may be called pure gymnastic training, that is, gymnastics whose sole purpose is to develop muscle. This indeed is the necessary meaning to be attached to pure gymnastic; any other kind has for purpose the training in a specific form of muscular exercise. After a course in pure gymnastics it is almost impossible to test the results fairly in the case of the individual students except by reference to the very exercises used in the training. Almost any instrument devised as a means of testing muscular strength is liable to give inaccurate returns if one of two persons to be tested has had experience of that particular instrument, so rapidly do the muscles acquire a special power of manipulating their strength to meet specific cases. There is a regular gradation from pure gymnastic up to the most complicated forms of special dexterities. A misshapen navvy will do better work in his ditch than will the best trained athlete of the same standard of strength as tested by some perfectly simple method such as the lifting of weights, though, as we shall find in a later chapter, there is more of dexterity even in lifting weights than one would naturally imagine. So much does special dexterity count that skilled workmen can judge each other by the mere way in which they handle their implements, before ever they make a beginning of actual work.

It seems quite a reasonable hypothesis that in so far as

any muscle is an integral part of the body it may be developed irrespective of the material on which it is exercised; but inasmuch as the muscle is an element in a complex mechanism that is modified to meet special exigencies, it is trained with a more or less distinct reference to the special nature of the work to which it is to be applied. The muscles in the fingers of a student of the violin who practises eight hours a day will no doubt be developed so that they are able for better muscular work in general than those of a person whose fingers are less exercised. But their highest powers will be brought out only in connection with the violin. Training can be carried to almost any degree of detail, but in the broad sense of preparation for life there is a limit beyond which it cannot be profitably specialised.

The power acquired by practice may be applied to any activity similar to that in which it was acquired, its effectiveness being in inverse ratio to the difference from the activity on which it was practised. We must pay for the freedom of an acquired general skill by the diminished special skill that this freedom entails. The greater the number of different circumstances in which an acquired dexterity can be applied, the less the degree of dexterity in each case.

Thus even on the physical plane it is clear that formal training has somewhat narrow limits. Power in general is acquired, but not skill in manipulating that power. Capacity is most economically trained when it is trained *ad hoc*. Sometimes, indeed, the passage from one form of exercise to another demands the unlearning of something that has been mastered, and so far from helping in the new training, this first training is a disadvantage. The typewriter touch no doubt exercises pretty much the same muscles as the piano touch; but skill on the typewriter cannot be transferred directly to the keyboard of the piano. The piano touch and the organ touch are not the same, and we are told that to a considerable extent they interfere with each other. Indeed the very fact that the two kinds of

touch belong to the same category and yet differ slightly within that category renders them somewhat antagonistic to each other. There is a tendency to the same sort of arrest that marks the interaction of contrary ideas in the Herbartian psychology.

No doubt a person trained on the typewriter will come to the piano better prepared in detail than one who has been trained at the joiner's bench, though allowance will have to be made for the disadvantage involved in having to unlearn certain of the typewriting peculiarities. Generally speaking, the closer two activities resemble each other the more easily can acquired power be carried over from the one to the other—the necessary allowance being made for the arrest of certain contrary elements.

This doctrine of the possibility of transferring to one department of activity the power acquired by practice in another has been applied in other than purely muscular matters. It has been maintained that mental power acquired in one department of work can be transferred to another, that a training, for example, in the Classics, results in the acquiring of certain intellectual powers that enable the mind to act effectively in any other department of mental work. This is what is technically known as the doctrine of formal training, and has given rise to a remarkable amount of controversy. By the very nature of the case the doctrine does not appear till late in the evolution of educational theory. At the early stages the problems of formal training and transference need not be raised, since the educand is being directly prepared for the sort of life that he is going to lead. The knowledge he acquires is such as can be directly applied to the needs of his everyday life, and has therefore a value of its own. That the acquiring of this knowledge gives at the same time a certain training to the soul need not be questioned. But at this stage the two values of knowledge are not discriminated, the intrinsic value completely overshadowing the training value. So long as the education of the young was individual, that is, so long as there were no schools and no professional teach-

ing class, the claims of knowledge as an organon in education lay dormant. The educand was being prepared for a special walk in life, and his educators saw to it that he acquired the knowledge and the skill necessary. Even when education became collective it was long before the training aspect of knowledge came into prominence; for at the earlier stages educands who were trained in the mass were usually being prepared for the same sort of life, a life of war, of politics or of religion. Here the same kind of knowledge was valuable to all the educands who were being educated together, and so was the same kind of skill. The training gained in the castle-courtyard had a direct and obvious bearing on the life work of the educands: the knowledge acquired by the well-born youngsters while serving as pages to ladies of rank had again a definite value in the after career of knighthood: while the training obtained in the monasteries was so closely related to the life work of monks as to be liker an apprenticeship than a general education. Even in that most dilettante of institutions, the Palace School, knowledge was valued for its own sake, though it is not difficult to see that the future statesmen, churchmen, and generals received there a very direct bias towards their life work.

So long as specific education was practically universal, the question of the transference of power from one form of mental activity to another did not arise. The educand could use all the knowledge he acquired in direct applications to his life work. But as the conditions of living became more complicated, and the choice of possible future careers for the educands at school became greatly widened, difficulties arose. The various branches of knowledge began to have different values according to the use to be made of them in different walks of life. For a while the schoolmasters met the difficulty by including all subjects in the school curriculum. But this encyclopaedic instruction soon became impossible, and a choice had to be made among the competing subjects. At first there was not very much difficulty, as the masters naturally selected those sub-

jects that had a common interest and value. In the mediaeval times, for example, it was essential for everybody who made any pretensions to an education to know Latin. This became recognised as an instrumental[1] subject, and therefore was taught without question in all the schools. It seems clear indeed that the Arts Faculty in the old universities originated in the preliminary course in this and some other subjects that were regarded as supplying the necessary means by which the students could be put in a position to attack the real subjects that they came to the University to master.

The school naturally limited itself by degrees to instrumental subjects. It was rightly enough considered that if the school supplied the educands with suitable instruments to carry on their life work no more could reasonably be demanded of it. But with the increasing complexity of school organisation, and the corresponding technicality of school work, there gradually rose up a certain antagonism between the practical man of the world and the school man. The school and the university tended to become things apart from the common life of men, and it was natural that the school should have a bias towards preparing for the life of the university rather than for that of the world. The schools became academic. Practical men objected, and wanted to know why obsolete and, for practical purposes at any rate, useless subjects were taught to the exclusion of what the world regarded as essential. A defence had to be found, and it was ready to the hands of the schoolmaster in this theory of formal training. It was maintained that the soul is able to develop itself better by means of some subjects than by means of others. The never-ending battle of the curriculum is always waged round this point. Certain subjects are labelled as nurture subjects and certain others as disciplinary. Certain parts of knowledge have

[1] The word *instrument*, as used in the text, is applied to *teaching* rather than to education. It makes Latin one of Sir John Lubbock's "knife and fork" studies. In connection with *education*, it is better to use the term *organon*, to prevent confusion.

to be acquired as knowledge, and certain others for the effect the learning of them produces on the soul. It is true that some writers claim that the law of parsimony must apply here, and maintain that the subjects that are of most value as knowledge must also be the best means of training.[1] It is a very common belief, however, that certain subjects have a special efficacy as whetstones of the soul. The classical languages are very frequently placed at the head of the list of disciplinary subjects, but other subjects are not without their supporters. The head of one secondary school, when the general tone is showing signs of a fall, will say that they must put on another couple of hours of Latin prose in order to brace up the flagging school tone: under the same circumstances the head of another school may prescribe an additional period of solid geometry.

In dealing with this doctrine of formal training, it is well to begin by noting that it is based on two assumptions that are worthy of our consideration. First, it is taken for granted that all subjects have a disciplinary value, in other words, that not only does the mind acquire knowledge, but in the very process of acquiring it, becomes to some extent at least modified in its own nature. It is difficult to challenge this assumption, as the soul obviously requires something upon which to react in order that there may be development at all. We cannot develop *in vacuo*. But, on the other hand, this need not affect the school curriculum since the ordinary experience of life is sufficient to supply all the material necessary for the soul to react against, and there is no need to fall back upon any school subject.

The second assumption is that school subjects have diverse disciplinary values. There is a very general belief that certain subjects have special qualities as instruments of training. If Latin is compared with shorthand as school subjects the language is vigorously proclaimed as immeasurably superior to what is contemptuously called the mechanical art of reproducing speeches. The Classics are

[1] Herbert Spencer: *Education* (1879 edition), p. 41.

usually defended as an educational organon on the ground that the Latin and Greek languages are so logical in form and so accurate in expression that the mind cannot but be moulded in the proper direction by studying them. But sometimes they are boldly defended on quite other grounds. Mr. J. C. Tarver puts the matter very bluntly: "The one great merit of Latin as a teaching instrument is its stupendous difficulty."[1] It is true that he rather contradicts here what he says at the beginning of his chapter in criticising Bismarck's suggestion of difficult but useful Russian as a substitute for Latin. There he tells us that the reason for preferring Latin is "the history of Europe for the last two thousand years"—an argument that carries great weight, but not on the side of formal training. Mr. W. G. Clark[2] frankly states that Latin owes its value to its dulness and dryness, and says that if a drier and duller subject could be found, then it should supersede Latin.[3] The Head of a College at Cambridge writes:

"Could any subject be devised more unattractive and useless than a dead language. Language is a means of communication. We set the boy to work from morning to night at a language which he is not allowed to think of as speech! But the results! I have no hesitation in saying that, on the average, boys trained on the classical side of our public schools make better men of science, of medicine, of law, than the boys who come to the University from the modern side; for the classics develop the power of sustained and orderly thinking. Some part of the credit of this most desirable result must be attributed to the discipline of working at a subject which offers in itself no temptations to work. No advantages, from the schoolboy point of view, are to be derived from its study. It does not come near enough to his own life to arouse his curiosity. His only motive for learning his lesson is

[1] *Observations of a Foster Parent*, p. 79.

[2] Cambridge Essays (1855), *General Education and Classical Studies*.

[3] One would almost think that Professor Huxley had this challenge in view when he wrote, in his essay on *A Liberal Education*, the words: "In the first place I could get up an osteological primer so arid, so pedantic in its terminology, so altogether distasteful to the youthful mind, as to beat the recent famous production of the head-masters out of the field in all these excellences." *Collected Essays*, vol. iii. p. 99.

that his master tells him to do so; and this we think should always be sufficient."[1]

If such arguments are to be treated seriously, we ought to look out for subjects of sufficient difficulty and disagreeableness. Experimental psychologists have made investigations into the fatigue-producing power of the various school subjects. When by aesthesiometer tests Dr. Ludwig Wagner[2] has determined that Mathematics produce 100 per cent. of fatigue, Latin 91 per cent., Greek 90 per cent., and religion and drawing only 77 per cent. each, he has, according to this view, really determined the relative disciplinary values of these subjects. It is hard to believe that intelligent teachers could accept such a preposterous classification of educational values. Most of the disciplinarians lay great stress on the logical arrangement of the classical tongues and the necessarily detailed and accurate reasoning involved in mathematics. But even those who lay stress on these points do not forget that difficulty in itself is rather an advantage than otherwise. It is quite commonly argued that French is inferior to Latin because it is not so hard to learn.

So long as mere difficulty is the standard, it is easy to admit that as a test of grit and endurance the classification might stand. But the moment the nature of the subject matter of a study is taken into account, new elements are introduced that involve certain psychological assumptions. There is a strong tendency for the disciplinarians to fall back upon the old faculty psychology, which lends itself readily to their purposes. It is on this account that Locke is sometimes selected as the first representative of the formal training theory, on its psychological side. If the different subjects of the curriculum vary in their disciplinary value, it is natural that there should be a qualitative as well as a quantitative difference. Certain subjects are said to be introduced into the curriculum in order to culti-

[1] Alexander Hill: Essay on Physiology in Spencer's *Aims and Practice of Education*, p. 283.

[2] *Unterricht und Ermüdung*, p. 131.

vate certain specific mental qualities: Mathematics for accuracy and logical order; the Classics for clearness of expression and the cultivation of literary taste; Mental Arithmetic for quickness; History for judgment; Science for observation and initiative. The whole field is marked out into areas of influence. In the attempt to construct a scientifically balanced curriculum it is sometimes felt that it is necessary to cut out a certain amount of matter in order that the pupils may not be overburdened. In such a case it is generally considered unwise to cut out a whole section. Relief is not to be sought, for example, by cutting out all the languages, or all the science subjects, or all the mathematical subjects. It is felt that one language should be cut out, one science subject, one branch of mathematics, so that each department of study should be represented in what is left of the curriculum. Otherwise it is believed that the resulting training will be lopsided. To all appearance these considerations are based upon a recognition of the faculty psychology. But an equally satisfactory explanation may be found in a totally different direction. The balanced curriculum may be said to have for its end the many-sided interest that we shall find is the aim of the Herbartian "educative instruction." In other words, the manipulation of the curriculum may be based upon considerations of mental content, and not on purely formal training.

There is indeed a certain inconsistency in the arguments in favour of the disciplinary theory. Sometimes it is maintained that the nature of the subject studied is of no consequence. The important thing is the result in training. Given a sufficiently difficult subject, the result must be a training in the power of application to any other difficult subject. But again the disciplinarian tells us that certain subjects are of special value in training for certain definite lines of capacity. So that the nature of the subject is after all of great importance. Indeed, according to many disciplinarians, the subjects of the curriculum could be arranged according to their power of influencing the various

activities of the educand. Each subject, in fact, could be supplied with a co-efficient of its power to manipulate each of the mental processes. This inconsistency is not surprising when we remember that the disciplinary theory originated partly at least from a desire to buttress up certain subjects as against others. In all probability what prevented the inconsistency from becoming prominent was the failure to observe the difference in the degree of *generality* of the various powers to be cultivated. Perseverance, courage, curiosity are all desirable in their proper place, are of almost universal application in life, and do not seem to be at all coloured by the material on which the educand has been trained.[1] On the other hand, the special power implied in the skilful turning of a phrase is without doubt closely allied to the ordinary work of a literary classroom. We are tempted to maintain that there are two distinct problems involved: first, the relative disciplinary value of the various subjects; and secondly, the possibility of the transference to one subject of power acquired by a training in another. Yet the two are seen to be one when we remember that the test of the relative disciplinary values of the subjects is the acquirement of general power, that is, power that may be applied or transferred to any other subject.

This whole question of transference has now been studied by a large number of educational experimenters, notably by Professor Thorndike of Columbia University. In his chapter on *The Influence of Special Forms of Training upon more general Abilities*, he points out that the question is sometimes not quite fairly put. "The real question is

[1] Though even here we find certain differences. How is it, for example, that as Mr. G. K. Chesterton points out, the same training at our public schools produces young men of much physical courage and little moral courage? Mr. Chesterton himself supplies the answer. "These schools do, upon the whole, encourage physical courage; but they do not merely discourage moral courage, they forbid it . . . they suppress it firmly." *What's Wrong with the World?* p. 228. But, if this be the true explanation, we are dealing with direct or specific education, not with formal training.

not 'Does improvement of one function alter others?' but 'To what extent and how does it?'"[1] To this he supplies the following answer, which he supports by experimental evidence:

"A change in one function alters any other only in so far as the two functions have, as factors, identical elements. The change in the second function is in amount that due to the change in the elements common to it and the first."

This conclusion leaves room for a certain amount of transference to take place, and it cannot be denied that ordinary experience supplies examples of the increase in general power resulting from training in some special direction. But if this improvement is limited to the elements common to the special training and the general activities in which the improvement is manifest, there is obviously great need for care in the choice of the subjects in which special training is to be given. One of the strongest arguments against the general value of special training is the well-known fact that pupils who excel in all the school exercises are often left far behind in real life by those who were their inferiors in the class-room. Making allowance for cases of late development, it seems clear that the cause of the reversal of the schoolmaster's estimate of ability is to be sought in the different elements to be found in real life as compared with those found in the subjects of the school. This does not necessarily lead to the selection of a purely utilitarian curriculum in the ordinary sense of the term *utilitarian*. It is not necessary that in schools we should deal only with the subject matter of what is called real life. The breakdown of the doctrine of Formal Training does not drive us back upon trade and professional schools, though it certainly emphasises the need for a specific bias in education. The ideal of mental gymnastic is very attractive. To turn out a skilled craftsman is good, but to turn out a fully-developed human being ready for activity in any department seems far better. The professed aim of our English Public Schools is to turn out

[1] *Educational Psychology* (1903), p. 80.

Christian Gentlemen. It is not often realised that this product is the result of as technical a training as that to which the graduate from a technical college has been subjected. The technical nature of the training at a Public School is brought out when the question is raised whether the trained product of the technical school may not be a Christian Gentleman as well as a capable utiliser of scientific knowledge. The Public Schoolmaster has an uneasy feeling that the technical man may be in a sort a Christian Gentleman, though, to be sure, not quite in the same way as the Public School boy. In short, the Public School boy forms the technical Christian Gentleman, and requires as specialised preparation as does the alumnus of the technical school.

The schoolmaster is usually proud of the effects of his training, and is quite prepared to stand by the results of a comparison between the boy who came to him at twelve and the boy who left him at eighteen. It need not be questioned that the boy of eighteen leaving school has a more fully developed mind than he brought to school; but it does not at all follow that the result was brought about by the special subjects that he has studied:

"It suits the vanity of educational theory to fancy that the changes are wholly due to the discipline. But it is almost certain that maturity alone would cause a fair gain in efficiency."[1]

It is very natural that the schoolmaster should attribute to his disciplinary studies the results that are certainly to

[1] E. L. Thorndike: *Educational Psychology* (1903), p. 93. It is curious to find this charge of vanity brought against the Herbartians, who reject this disciplinary theory. Professor Darroch, in his *Herbart: a Criticism*, tries to explain how the bad theories of Herbart claim not only adoption, but enthusiasm, and makes the same charge as Thorndike brings against the disciplinarians. Of the Herbartian theory Professor Darroch says, on page 94: "It is so easy to understand, it imbues the teacher with the idea that his power in the work of education is almost absolute, and in this way it is pleasing to his self-conceit." Mr. Keatinge joins in with his criticism of the Herbartian psychology "and the insidious flattery that it supplies to the teaching profession has insured its popularity among those whose enthusiasm is greater than their critical powers." *Suggestion in Education*, p. 108.

be noted when the pupil leaves school, and there must be some elements of truth in a theory that is so widespread and has been so long held as that of Formal Training. Wherever there is an organised system of education the theory flourishes, and it can be traced at least as far back as the Greek States. It is set forth in its broadest form in the phrase "Gymnastic for the body: music for the soul." Certain subjects have to be studied not only for their own sake but also for the sake of their effect upon the soul.[1] Plato makes fun of Glaucon for sharing the fear of the world that makes people always on their guard against the appearance of insisting upon useless studies. Even if a subject is not directly useful it may be very valuable in its effects on the soul. "As experience proves," says Socrates, "anyone who has studied geometry is infinitely quicker of apprehension than one who has not,"[2] and the complaisant Glaucon naturally agrees. Plato's views on the diverse moral effects of the different musical measures and instruments are also in favour of the formal training position. But with regard to poetry and the drama, it is clear that the actual content is the important thing. Plato's teaching here is quite on the lines of specific education. The same may be said of the system of education as a whole. On Plato's scheme, after all, the different classes of the community were being trained to fill the particular posts to which their birth entitled them. In the *Republic* the

[1] F. P. Graves, in his *History of Education*, vol. i. p. 189, refers the beginning of Formal Discipline to the *Republic*, vii. §§ 522-531.

[2] *Republic*, vii. 527. Jowett is not pleased with this. He tells us that Plato "has no sufficient idea of the effect of literature on the formation of the mind, and greatly exaggerates that of mathematics." *The Dialogues of Plato*, vol. iii. ccix. With regard to the general position of Plato on the question of formal training, it is worth while to note that the theory is present in just the right degree for the stage of evolution that educational theory had reached in the fifth century B.C. Formal training as a theory certainly appears late in the general evolution, but it has to be remembered that the stage reached at the Platonic period is altogether abnormal, and far in advance of what might have been expected in the ordinary course.

spirited, the money-getting, and the philosophic classes each got the education necessary for its special needs. Even if education in the fullest sense was denied to the lowest class, it received the education of a life so arranged that the individuals when they reached maturity would find themselves prepared for the sort of life that they were expected to lead. It was a clear case of what we have called specific education.

In the education of the citizens it is quite obvious that the exercises of the *pentathlon*—running, leaping, discus-throwing, boxing and wrestling—were specifically intended to meet the needs of men who were being prepared for the kind of warfare that was prevalent at that time. It is true that the chief exercise, wrestling, was not carried on in the palaestra under the conditions that obtained in the actual warfare of the period, and to that extent it may be claimed as an example of formal training. So with the throwing of the discus. But in both these cases the activities exercised were so closely allied to those needed in actual warfare that the Thorndike theory would accept them as legitimate, while, on the other hand, it may be urged in favour of specific education that in many cases discus-throwing was supplemented by javelin-throwing, a distinct reversion to training *ad hoc*. So with the elaborate dancing games of the Spartans. They were called games, but they had a wonderful resemblance to the real thing. They provided specific education for the practical activities of life. The conditions under which young men had to forage for themselves as part of their education were so remarkably like those of real warfare that it is rather difficult to distinguish them. In camp the epheboi lived a life that was much more strenuous than that demanded from many a modern army during a campaign.

Not only does the doctrine of formal training recommend itself to the professional educator whose interests it appears to favour, but it finds some justification in a psychological analysis of the conditions of the case. The supporters of the theory do not forget that in the process

of education, however much the subjects vary, the mind concerned is always the same. Since all knowledge acquired by the individual must be the product of that individual's mind in reaction upon material supplied, it is clear that we have here a unifying principle. Writers on method find it necessary from time to time to remind their readers that method is of the mind and not of the subject studied. The share of the mind in making up what we call knowledge is abundantly recognised, and it is only natural that the uniformities of mental action should be enlisted on the side of formal training. There is indeed at the present moment a sort of half-hearted revival of the formal training dogma, which really amounts to no more than an intelligent recognition and statement of mental uniformities and their relations to the various subjects studied. Investigators are seeking out the common elements in different mental processes, and are striving so to co-ordinate the various school subjects that they shall emphasise desirable elements, and thus favour the cultivation of the selected element by bringing it prominently forward under as many different circumstances as possible. In this way we are enabled to pass from the particular to the general, to get general results from disparate elements. In other words, we are succeeding in demonstrating a kind of formal training. By applying the same mode of procedure in dealing with quite different subject-matter we are able to form mental habits, not merely habits of detail, but what may be called general habits. To this extent Professor William James is on the side of the disciplinarians.[1] These general habits may be regarded as the

[1] *Principles of Psychology*, vol. i. p. 126. "It is not simply *particular lines* of discharge, but also *general forms* of discharge, that seem to be grooved out by habit in the brain." In the same way Professor Royce speaks of "a given 'set' of the brain as a whole, that is, a given sort of preparedness to be influenced in a certain way—yes, even a given tendency to change, under particular conditions, our more specific fashions of activity." Other writers regard all habits as essentially specific, and therefore consider a "generalised habit" as a contradiction in terms. As we shall find presently the current view demands the

residuum left after certain activities, which need not be of the same kind. For example, the general habit of attention may be cultivated on totally disparate material. But it does not at all follow that we can apply the same power of attention that we have cultivated, say in classics, directly to mathematics. All that this generalised habit warrants us in expecting is a general tendency to begin to attend to what the soul directs. It is probable that within reasonable limits the greater the diversity of subjects on which the generalised habit has been formed, the more effective it will be when applied to new cases. Thus the educand who has acquired the habit of attending to five different subjects will probably have a better chance of maintaining his attention in a sixth subject than would have been the case had he practised attention only in three. It must not be supposed, however, that these generalised habits can in any way compete with the specialised habits, with the habits that have been acquired *ad hoc*. For example, memory can be trained as memory only to a limited extent. No doubt Pillsbury tells us:

"We have to do in memory, then, with a large number of fairly distinct physiological capacities, but their use has become so dependent upon habits common to the different capacities that they are functionally parts of a common whole. Training one part thus trains related parts, and the whole in some degree." [1]

Yet we know that memory can be best trained for any particular purpose by exercising it in the very material with which it is to be called upon to work.

While we thus find a general impression that there is a certain amount of transfer of power even in cases of very different activities, the amount of transfer is probably very small where there is little in common between the two

presence of consciousness in all the results of formal training, which after all is only a statement of the meaning to be attached to the term *generalised* as distinguishing the activities mentioned by James and Royce.

[1] Educational Review, June, 1908: *The Effects of Training on Memory*, pp. 26-7.

activities, and it is greatly to be desired that means should be found to test the amount of transfer in various cases. It is therefore natural that an attempt should be made to apply to this problem the newer quantitative methods that have been introduced into educational discussions. If one subject is better than another as a means of discipline, then the better subject should be able to carry over a greater proportion of power. Since in at least some cases this proportion can be estimated and expressed in numerical terms, there is obviously a way of comparing the disciplinary values of the various school subjects. Attempts are accordingly being made to test the amount of transfer by the application of the correlation formula of Dr. Karl Pearson, and the somewhat simpler formula of Dr. Spearman. The method of applying this formula is very clearly put by Dr. F. H. Hayward:

"If it were found, for example, that there was 'high correlation' between skill in Latin and skill in 'managing other boys,' this would prove either that there was a common cause operating, such as high native intelligence, or that the one kind of skill had passed over and influenced the other. If a school were divided into two large groups of boys approximately equal in ability, and if one of the groups were then trained in Latin for several years, and the other group in science, and if at the end of the time the correlation between Latin and 'managing boys' was found higher than that between science and 'managing boys,' the claims of Latin would be established on a firm foundation." [1]

The difficulty of applying the correlation formula to such disparate subjects as Latin and the management of boys is great, because of the exceeding difficulty of getting parallel results. It is not hard to obtain a numerical coefficient of the results of training in Latin, but when it comes to estimating a boy's power of managing other boys there is little hope of getting general agreement as to methods of determining results. The first attempts at applying the correlation formula, therefore, will naturally confine themselves to a comparison of results in the various school subjects. Excellent work in this direction has been done

[1] *Day and Evening Schools*, p. 565.

by Mr. W. H. Winch, Dr. W. G. Sleight, and Dr. E. O. Lewis. The general results are entirely unfavourable to formal training. Certain of the investigations show a small amount of transfer, but this is accounted for by the common elements involved. What is now to be determined is whether there is high correlation between the total number of common elements in given cases, and the amount of transfer that can be established in those cases. We are obviously only at the threshold of a quantitative examination of the whole question in all its details. Enough has been done, however, to show that it is exceedingly unlikely that any startling results will be produced.

The balance of expert opinion is now so solidly against the general dogma of formal training[1] that as an educational force it must be regarded as moribund. It cannot be denied that within certain narrow limits, determined by the distribution of common elements, there is transference of power from the study of one subject to the study of another.[2] But the transference is so small as to make it practicably negligible for educational purposes. The educator will find it to his advantage to restrict himself to direct training in every case. No doubt he will be glad to avail himself of every additional advantage that may come from the transference of power into alien regions.

[1] For an excellent *résumé* of the present state of the controversy, see S. S. Colvin's *The Learning Process*, 1911, pp. 211-250, and W. H. Heck's *Mental Discipline and Educational Values*, second ed., 1911. Heck gives an account of, and supplies references to, the literature on the subject, and to the relevant experiments. Much of this literature is available only in the pages of periodicals. The latest statement of the general position is to be found in the Report of the Proceedings at a Conference on the subject held under the auspices of the London County Council in January, 1912, where the most recent views on both the psychological and the practical aspects were summarised.

[2] It is worth noting in passing that all common elements are not of equal value to the educator. Dr. Sleight makes a useful distinction between mere common elements and "usable" common elements. See his paper on "Memory and Formal Training" at the L.C.C. Conference, Jan. 1912.

But he will be well advised to treat all such gains merely as by-products. Doubtless we have a good deal to learn yet about transfer and the other aspects of formal training, and it will be to the interest of the educator to keep a careful outlook on the results of investigations. He will find that at the present time there is a general vagueness in the writing on the subject. For example, it is not always clear whether transference means from one process to another, or from one kind of material to another. For the educator's purpose the important matter is transfer from process to process. There can be no vital transfer of subject matter without the intervention of mental process. In fact, in all the serious discussions of the subject the notion of consciousness is prominent. While the general doctrine of formal training is almost universally rejected, there remains a wide belief that there is something in experience that gives colour to the popular notions on the subject. This something may in the last resort be reduced to the power the educator has of building up general concepts of method in the minds of his pupils, and this always implies the presence of consciousness. In short the gains of formal training are to be found in ideals rather than in habits. In gaining power in a given subject the process is largely one of eliminating consciousness.[1] Each new activity finds its way through the portals of consciousness, and as the soul gets accustomed to the activity and the object of the activity, the need for conscious supervision disappears, and the lower centres are allowed to carry on what the upper centres began. In transfer, however, what remains is a sort of special alertness to a particular kind of stimulation. Bagley puts the case excellently for formal training when he says that the doctrine may be maintained:

"provided that we understand very clearly that this increased power must always take the form of an ideal that will function as

[1] Cf. Gustave le Bon's motto on the title page of his *Psychologie de l'Éducation*: "L'éducation est l'art de faire passer le conscient dans l'inconscient."

judgment, and not of an unconscious predisposition that will function as habit. In other words, *unless the ideal has been developed consciously, there can be no certainty that the power will be increased, no matter how intrinsically well the subject may have been mastered.*"[1]

Heck and Bagley differ a little about the emotional element, Bagley emphasising and Heck discounting it, but they are agreed upon the essential point which is the need for the presence of consciousness. The importance of the notion of the ideal and of consciousness is seen when we seek to apply the idea of formal training to morals. If teaching is to take the very direct form of clear statement and exact illustration, there need be no difficulty. Pupils who learn by imitation, and by reading of the doing of persons in exactly the same circumstances as themselves, have no need of the benefits of formal training. But so soon as the tale from which the moral is to be drawn introduces elements quite foreign to the pupil's experience, the need for the benefit of formal training makes itself felt. The pupil must generalise from the experience presented to him, and this must be done with a certain amount of consciousness—in other words an ideal must be formed.

The belief in formal training is a natural stage in the evolution of educational theory. It stands midway between the specific education that results from the needs of an early society and the specific education that is the natural outcome of well developed theory. Nothing could show more clearly that it has now exhausted its mandate than the fact that at present there is a recrudescence of the demand for vocational education ; not however as purely vocational, but vocational combined with cultural education. It is recognised that vocational education by itself is too narrow, and tends to defeat its end as a general education in proportion as it succeeds as a vocational. We have in fact boxed the compass in our passage from the old specific education of the prehistoric times to the new specific education of the present. The difference

[1] *The Educative Process*, p. 216.

between the two is that the old form had the vocational and the cultural, so far as there was room for the cultural at all, combined without either the educator or the educand being aware of the fact. In the new form, vocational and cultural are to exist side by side, and are to be attended to in their proper proportions, the larger amount of attention being given to the cultural, and wherever possible an attempt being made to cause the cultural and the vocational to interpenetrate. Now, as in the old times, there are cases in which the vocational can be made practically all cultural. The artist, the poet, the orator, and even, under favourable circumstances, the teacher, may well regard his whole work as cultural, and any specific preparation for his vocation may be legitimately claimed as a case in which the specific loses itself in the general.

It is well to draw from the truth underlying the disciplinary theory all the comfort it can give in the way of assuring broad general gains that may be applied in all departments of life; but as a working principle it is now recognised that the most profitable way to communicate skill in a particular direction is to give practice in that direction. Specific education has once more come to its own. In fact the whole evolution of educational theory may be said to be a great sweep from specific education back again to specific education, through a long period during which formal training held the field. For we have seen that the beginnings of education were concerned with the preparation of the educand for a particular walk in life. At the start there were no theories at all, and the first theories that made their appearance concerned themselves with the best methods of producing definite and clearly conceived practical results. There was no thought of making a pupil learn to do one thing in order that he might be able to do something else. With the consolidation of schools the specific nature of education began to be obscured, by the necessity for standardising the work. The schools became more and more places where pupils were prepared for the various kinds of life work. At first

the schools used sections of the future life work of the pupils as the material on which they were educated. But when the differentiation of life work rendered this no longer possible, great difficulty arose. The school had to keep in touch with the needs of life, had to give a training that would prepare for life, and yet it had no longer the opportunity of giving real bits of life on which the educands could form themselves. The school is certainly a society, and therefore offers a social environment that helps to prepare for the wider outside environment. But it is necessary, in order to get the full advantage of school life, that the two environments should be assimilated as closely as possible. The greater the number of common elements in the two the greater the practical value of the training. Professor Darroch realises the importance and the difficulty of the problem here suggested:

"What seems to me of importance in the educational reference is to realise the differences between a school society and the other social groupings. In particular, what the educational psychologist must note is the fact that in the school we are compelled in many cases to substitute for real problems factitious problems, for real purposes factitious purposes. This is unavoidable, and herein lie the main difficulties of educational method."[1]

At the earlier stages no doubt those factitious problems and purposes had a sufficient resemblance to those met with in real life, but the whole tendency of the school was to become formal, to elaborate methods, to get out of touch with actual life. So long as education was in the hands of those whose main interest was in the ordinary affairs of life, there was little tendency to pedantry. The men-at-arms who licked the youngsters into shape in the castle courtyard, were soldiers in the first instance, and only incidentally trainers of youth. There was little temptation to theorise about their work with the young. Whatever tendency they had in the direction of theory would find ample scope in the subject-matter of the pro-

[1] *The Place of Psychology in the Training of the Teacher*, p. 42.

fession of arms. There was plenty of theorising about the balance of the sword, and the various ways in which the weapon could be used. But the result was a body of more or less valuable knowledge that was prized for its own sake. The custodian of the lore of swordmanship felt that his duty was discharged when he had divulged his knowledge. It was taken for granted that the learner was eager to get the coveted knowledge. He might be stupid enough not to be able to profit by it when it was communicated, but the master felt that he had discharged his full duty when he had set forth the secrets of his craft. So with the artisans and their apprentices. The incidence of interest was always on what had to be done, rather than upon the teaching of how to do it. What mattered was the thing produced, not the effect its production had upon the producer.

With the establishment of a regular teaching body in the community the point of view naturally changed. No doubt a certain amount of knowledge had to be communicated to the educand, but the ultimate test of the success of the educator is always the sort of person he produces. At first the knowledge communicated was of such an immediately useful kind that its mere possession by the educand was a justification of the education received. This was markedly the case with the old universities. They were regarded as storehouses of knowledge, and the students came from all parts for the sake of the mere knowledge, and with no ulterior thought of training. "To go away a wise man" was the old way of expressing the successful completion of a university course; but all the indications point to the interpretation of "the wise man" as a man full of knowledge. The "wisest fool in Christendom" might have done credit to one of the old-time universities, but would hardly be claimed by the supporters of formal training as an example of the working of their theory. It was when the educator changed his ground, and, as we have seen, maintained that the subjects taught were of value less as actual knowledge than as a means of

affecting the character, that there arose the idea of a training altogether apart from any consideration of the future life of the educand. This view is best illustrated in connection with Humanism, which forms the subject of the next chapter.

CHAPTER VIII

HUMANISM

In educational theory Humanism may be said to have the same relation to Naturalism that Scholasticism has to Monasticism. Naturalism and Monasticism deal with education practically from the point of view of the formation of character. Their aim is to produce a certain kind of man. Humanism and Scholasticism are mainly concerned with knowledge. It is true that the acquiring of knowledge cannot be entirely dissociated from the modification of character, and at the earlier stages Humanism made a much wider claim than in its years of decadence. As the name implies, it took all human interests as its province ; and at its best period it did regard the educand as a being to be modified by the material supplied by the educator. But in the end it yielded to the same formalism that it attacked in the Scholastics, though even at its lowest ebb it did maintain a certain connection between the subject studied and the mental state.

The rediscovery of the classical literatures was only one aspect of the reaction against the exiguous abstractions of the schoolmen. There was an appeal quite as much to nature as to books. "Nature according to Aristotle" was not enough to satisfy the minds of men. They learnt all he had to tell them, and they wanted to draw their own conclusions. But the mechanical explanations to which his facts invited them, were forbidden by the church. Classification was excellent, so far as it went, but there was a latent demand for something more. Men

wanted explanations, not mere statements of fact. Accordingly, when the Renaissance came, it was marked by quite as keen an enthusiasm for nature as for books. The two enthusiasms in fact coincided in Human Nature, which was studied alike in real life and in books. Inevitably these studies were both cause and effect of a great desire for freedom of life and of thought. Thus it comes about that at its earliest stages Humanism cannot be sharply distinguished from Naturalism. Perhaps the difference may be best stated by saying that in Naturalism the interest is in human experience as such, whereas Humanism has a tendency to treat all human interests as material for *study*. In the first revolt from Scholasticism the humanists no doubt revelled in their new found freedom: they were almost content to enjoy life as it came, without further thought. The very zest of life, however, drove them further afield in search of a fulness and richness that what they considered their somewhat barren times did not offer; though we now look back upon those times in the very same way as the humanists looked back upon the classical. They fell back upon the rich stores of antiquity, and sought to live over again the lives of their more fortunate predecessors. The classical times, seen through the softening haze of distance, supplied a not unworthy model, and at first the humanists gave themselves up honestly to the effort to realise in their lives the old ideals.

At the beginning, no doubt, the humanistic attitude could hardly be called educational at all. The naturalistic element predominated. Men simply let themselves go. It was the negation of education (as discipline at any rate) or a forgetting of the need not only of power but of control over it. Humanity set about supplying its own demands for "more life and fuller."

By and by the desire naturally arose to let the young share in the heritage of joy that had come down from the ancients. The difficulty of the languages would at once present itself, only to be met by an expedient that readily recommended itself to a generation that regarded childhood

as a necessary but regrettable waste of time. Young people could not appreciate the beauty of the classical authors, but, though their other powers were not yet sufficiently developed, young people's memories were in excellent working order, and the youngsters could put in time very profitably learning languages that would afterwards unlock for them the treasure-houses of antiquity. Those who had learned the classical languages as adults would certainly remember the difficulties they had experienced with the more or less mechanical details, and would be aware how incompletely they had mastered them after all. It was natural, therefore, that these men should see to it that their children began this difficult work betimes. Yet there can be little doubt that at the earliest period adults were eager that the young should be initiated as soon as possible into the ideas of the old world. The language was at first regarded as a hindrance, something to be overcome, the price to be paid for admission to a new and enchanting realm of knowledge. Even as late as the time of Milton we find emphasis laid on the classical authors as a source of knowledge. He recommends that the books should be read for the sake of the subject-matter. Varro, Columella, and Vitruvius are to be read for the information they give as part of the general instruction of the pupil.[1] Perhaps Bacon had a more scientific justification for the use of the classics in education. He remembered that the ancient times were after all the youth of the world, and it may be that he regarded the classical times as therefore peculiarly suitable for the young to study.

It is rather remarkable that while Humanism began with such wide ideas of the scope of education it should have done so much to narrow the curriculum. The classical languages and literature came to be regarded in a more and more technical sense. The sciences that had found a place among the quadrivial arts were gradually dropped from the school curriculum. Even Mathematics for a time lost its

[1] *Tractate on Education.*

place, though that was afterwards regained. Next the classical languages acquired a predominant position in the studies of the schools, at the expense of the classical literature. Even the languages were subjected to limitations both in the method of teaching and in the parts to be studied. The classics that had formerly been studied for inspiration became more and more subjects of imitation in ever increasing degrees of closeness. One author dominated all the rest. Cicero became the beginning, middle and end of school study. His style was made the pattern, and sedulously imitated. Other authors were neglected. His vocabulary, his constructions became the standard. Ciceronianism became a cult that bordered on a religion.

When classical studies had been reduced to mere linguistic, it was necessary to find some other justification for their continuance as the backbone of the curriculum. It was at this stage that the disciplinary argument began to be brought forward. Since then there has been a constant warfare going on about the value of classical studies. In view of the present state of opinion on the doctrine of Formal Training, the more intelligent classicists no longer put forward the bald argument that those elegant and logical and difficult languages must in the nature of things form the best means of cultivating the minds of those who study them. A double line of defence is adopted. In the first place the classicists seek to restore the literature to its proper place as compared with the exact manipulation of the language. Pure scholarship is coming to be more and more recognised as something very different from what is meant, in education, by Humanity. The old civilisations are to be studied for their own sakes, and classical knowledge will, under these circumstances, take a high place among the nurture knowledge at the disposal of the educator. The second line of defence is adopted by those who do not see their way to give up the ideal of pure scholarship as a training of the mind. They maintain that Humanity means the study of anything whereby man expresses his individuality. Art, Literature,

Archaeology are all branches of humanity. But language is none the less so. It is after all perhaps the most perfect form in which human thought can be expressed, and therefore in itself,[1] and apart from any literature, it forms a most suitable subject of study. There is force in the argument, so long as it is applied to language in general, but when it is advanced in favour of a privileged place for the classical languages, it must be considered in relation to the people who used it, and to the literature they expressed by its means—in other words we must fall back upon the genuine humanistic argument.

The two extremes between which Humanism moves are Naturalism on the one hand and Pedantry on the other. In the individual adult life the bias is towards Naturalism. This is shown in the history of the early humanists, and to-day's experience of the effect of humanism on grown men and women points in the same direction. In educational theory the bias is the other way. Pedantry is the besetting sin of the educational humanist. This is not wonderful, when it is remembered that the school, being after all but a limited part of life, does not afford that breadth of experience that is necessary to the full development of the teacher's humanity, and unless we have broad humanists as teachers it is impossible to avoid the tendency to pedantry. It is true that the teacher should not confine himself to his school world. Your genuine teacher of the humanities must himself know, understand and live with men. He must be able to interpret books in terms of human nature. The humanistic school must not be regarded as a place apart where the educand can escape from the contaminations of society. If it cannot be said that nothing of human interest is alien to the school world, it may at least be maintained that everything worthy and great in humanity, and much that is not great but merely

[1] Literary schoolmasters are never tired of quoting Shelley's lines, when, speaking of the Deity, he tells us:

> "He gave man speech, and speech created thought,
> Which is the measure of the universe."

simple and kindly, should have free course there. It must not be forgotten that in the last resort Humanism is a protest for the individual as against the school. Under present conditions it is neither uncommon nor unreasonable to bring a charge of bookishness against Humanism; but at its best period Humanism was itself a protest against bookishness. Books are to be used no doubt, but they are to be used for what they can do in bringing us into relation with reality. Still at its more exhausted stages Humanism is certainly open to the charge of bookishness, and as a matter of fact this was the point on which it was attacked by those who are called realists.

In educational theory Realism has nothing to do with the scholastic controversies. It is not opposed to nominalism or conceptualism. Nor is it directly concerned with the idealistic interpretation of experience. It has no quarrel with Berkeley. It confines itself to a very practical protest against mere verbalism in education. Yet when the matter is traced to its foundations there is found to be room for quite an interesting metaphysical discussion, for, after all, practical human life never gets very far away from the ultimate questions of philosophy, however much it may ignore them.

We observe an ever recurring tendency in educational theory to fight about the place of words. To some extent their importance is accounted for by the fact that whether they are essential to individual thought or not, they are indispensable in our communications with our fellows, and therefore in education. But there is the further fact that words indicate not merely the possession of certain ideas, but the mastery of those ideas. If words and ideas have been properly correlated in the process of education, the use of words is a proclamation of the freedom with which ideas may be used.

"Things before words" is the cry of the cruder realist, who is irritated by the abstractions of the schools and the preponderance of the purely verbal. No doubt it is easy to make out a case against this extreme form of realism

by showing that words are as essential as things in the mental development of the educand. What is wanted is the proper co-ordination of things and words. It is customary to meet the realist's cry by another: "Things and words together."

A sophisticated Realism makes a more dangerous attack by dividing studies into verbal and real. Verbal studies deal with mere words, grammar, linguistic: real studies deal with actual things. It is maintained that real studies bring us into contact with life, with things as they really are, while verbal studies are merely scholastic and never get the educand out of the misty round of phrase-spinning. Real studies are positive, they have tangible results; whereas verbal studies do little more than turn the educands into somewhat intelligent perroquets. Again, it is not difficult to show that the attack is unfair. Grammar, philology, logic are as real as geometry, geology, and chemistry. Language is as real and as interesting as science. The trouble centres round the word "thing," and here we are obviously in the very heart of metaphysics. What the realist usually understands by the term is something tangible, and he has behind him the natural tendency we all have to regard a dog as something real, while the mere name *dog* is unreal. We have here an echo from the old scholastic battlefield. It has to be admitted that the word *dog*, the mere *flatus vocis* is not real in quite the same sense as the dog in the street is real. But we are not to be misled by the word *Realism* into regarding the material of humanistic study as in some way insubstantial and disappointing. From a certain point of view it may reasonably be maintained that the word *dog* is more permanent than the transient creature of flesh and blood that barks in what is called real life.

The fact is that Realism has a legitimate place in educational theory as a protest against the errors of a degraded Humanism, but it is hardly entitled to an independent existence as an educational system. It merely emphasises an aspect that is or ought to be included in Humanism.

True Humanism never loses touch with reality. Realism and Humanism can differ from one another only with respect to subject-matter. The realist may claim as his own all the studies that deal with dead matter, or at any rate with matter that does not directly affect human nature. But in that case he must borrow from Humanism the very language in which he expresses his results, for after all there is more than an epigram in Condillac's statement that science is but a well-made language. Still there is a certain advantage in retaining the words *humanist* and *realist* as representing different points of view in education, even though the two must have a great deal in common. Indeed Humanism and Realism should be regarded as complementary to each other. They make up between them that scheme of education that deals with knowledge as an organon. In both, the matter studied is of fundamental importance, though the way in which the matter is presented may be very different in the two cases.

In spite of the different method of approach there is no antagonism between Realism and Humanism. The dog that the realist lays stress upon must be considered by the humanist if the word *dog* is to have the place it ought to have in the language being studied. The realist approaches the problem of knowledge from one point of view, the humanist from another. However we may approach the dog, we must in some way or other make him a part of our world of experience. We must assimilate him. He must be made a part of the knowledge that is used by the educator in his work of modifying the educand. We must not forget that our present interest in Humanism is based on its educational applications. Like all schemes of education Humanism seeks to make the educand at home in his environment, and there is a natural tendency to simplify that environment as far as possible in order to make the process more easy. It is not difficult to understand the educator's temptation to take short cuts to reach that acquaintance with the environment that is essential to the ends of education. Words naturally

offer themselves as a specially useful means of bridging the gulf between the educator's experience and the educand's. It is of the essence of the educator's art that he should be able to abbreviate the processes by which valuable experience may be acquired. We have seen that to this end the school is compelled to make an extensive use of factitious problems. But even this shortened method is tedious, and the eager educator is tempted to abbreviate still further, and try to convey to the educand a second-hand experience by the use of description. Words come to take the place of experiences.

It is sometimes said that words take the place of ideas, but this is psychologically unsound. Words that can be used intelligently, so as to be understood by others, must represent ideas of some sort. They indicate mental process. But the ideas represented by words may be false ideas. They may not correspond with what is found in the external world, and in that case there is confusion between the inner and the outer world. Hence it comes about that there is need for the periodic reaction against the tendency to abstraction that is inherent in Humanism. When the material of the humanistic educators becomes too fine spun and ethereal, some more or less practical reformer springs up and does his best to bring down the word-spinners to the level of practical needs. Realism is not a force acting from without and attacking Humanism. It is rather a revolt within the borders of Humanism itself. At the earlier stages at any rate, the realist was not a man who called upon his fellows to give up the unprofitable studies that concerned themselves merely with the interests of men, and turn to the study of the hard facts of physical science. It was not a question of curriculum but of method. The realist was merely a humanist whose conscience was roused at the distance to which Humanism had wandered from the realities of life. One cannot glance over the quaint drawings in Comenius' *Orbis Pictus* without realising the enormous importance the author attaches to words.

All that he wants is that those words should be closely related to the things they represent. Realist as he is usually called, he proclaims himself humanist, in the broad sense of that term, in almost all his writings, and even in the narrower sense he qualifies himself to rank as a humanist by the many collections of words he publishes under all manner of fantastic titles.

It is true that the time did come when Humanism became identified with that kind of education that deals with the specifically human culture as opposed to the culture that comes from the study of the facts of science. Here the subject-matter became of the first importance, and the distinction between Humanism and a kind of Realism was to be found in the curriculum. This involved in a very direct way the assumption of the Formal Training Dogma, and the classics and natural science were pitted against one another as training material. But it does not at all follow that Humanism must stand or fall by the dogma of Formal Training. No doubt it is generally taken for granted that Humanism as an educational system is bound up with the training value of certain subjects, and in fact many writers maintain this in so many words, and assert that Humanism almost typically illustrates the working of the doctrine of Formal Training. Yet when we look into the matter we find very little to justify this view. The more we examine the working of Humanism, the less ground we find for supposing it to favour formal training.

It has to be remembered that though Humanism as an educational system has a more definite chronological limit than any of the others, the spirit of Humanism can be discovered long before the system crystallised under the conditions of the Renaissance. The spirit of the old Greek education was eminently humanistic. Culture in old Greece was reserved for the few, and this is a very usual, though by no means an essential, element in the conception of Humanism. Further, the knowledge communicated was mainly concerned with the manipulation of men,

What physical science was known was treated with a very direct human reference. There was practically no division of labour among the learned. Each philosopher took all knowledge to his province. But knowledge was not valued for its utility. Technical knowledge was not highly esteemed among the cultured classes, though they were quite willing to use and even to admire its results in the hands of unfree men. The citizens were to be allowed to develop fully and freely, and to cultivate the arts as far as these did not interfere with their dignified leisure nor make them *βάναυσοι*. Yet with all this it was not generally supposed that the subjects they studied produced on their minds any *specific* effect. It will be remembered that Plato does at least suggest the idea of formal training, but the most conspicuous example he adduces is from a non-humanistic study—Geometry. In art or music a citizen might acquire a fair degree of proficiency, but anything approaching special excellence was to be left to the unfree men. Professionalism was the mark of the slave. It was not that art or music produced evil effects. On the contrary these subjects were used as part of the ordinary education of the citizen. But excessive skill in them argued, as in the well-worn story of Herbert Spencer and the young man who beat him at billiards, a mis-spent youth. At first sight it may appear that what the Greek resented was anything approaching the technical. Yet in a very real sense the education of the Greek citizen was technical. He had to learn all such things as are necessary to full citizenship. He had to be able to bear arms, to understand the laws, and to take a part in law-making. Education was really carried on, as we saw in Chapter VI., at the specific stage. The citizens were prepared for a definite walk in life. Knowledge that under other circumstances might be regarded as liberal, in their case was really professional. The very culture subjects that they studied had their utilitarian application. It was impossible to carry on ordinary life comfortably among the leisured classes without a knowledge of certain poems and stories.

The underlying ideal of the humanists is a liberal education, the education suited for a free man. When we go into the matter we find that what is understood by a free man is one who is not compelled to acquire any special skill for purposes of utility, but can give his time to subjects that are regarded as of special culture value. He can take up his time for example with literature, music, the fine arts. But in the last resort he is not regarded as a man who is cultured because he has studied those subjects, but because he is familiar with them. It is not that they have left a residuum of training and that he is therefore a better man than those who have not had the opportunity of being trained in the same way. He is esteemed because he knows the particular thing he has studied. If, as Ruskin assures us, a man damns himself forever as a man of culture when he speaks of Iphigenía as Iphigénia, it is not because his ear has not been trained in general, but because he has not learned how to accent that particular word and others like it; in short, because he does not know things that people of a particular set do know. To be able to distinguish a Botticelli from a Fra Lippo Lippi marks a man as a person of culture; but there is no implication that he has by studying these old painters acquired any special power that can be applied to other matters, for example to stocks and shares. It is true that many men pass for cultured who do not know the subjects they are supposed to know, but still they *are* supposed to know them. The very fact that they must pretend to know certain things is a confession that a knowledge of some specific facts is regarded as in itself essential to culture. In plain English, the man of culture is taught certain things that are regarded as necessary to be known in the particular circle in which he moves. The training of a man of culture is as technical as the training of a civil engineer. In the eighteenth century it was necessary to be familiar with certain small portions of Latin and Greek literature, and to be able to quote from them easily and frequently, if one wished to pass as cultured. At the same

period, in Scotland, the ordinary peasant had a knowledge of the Bible covering a wider range of matter than the man of culture's selection from the classics, and the peasant could season his conversation with as apt quotations as could the other. So far as training was concerned the two men were on equal terms, but only exceptionally broadminded men would think of saying that the peasant was cultured. It is the mental content that marks the man of culture, not the mere residual power gained through mastering it.

Suppose, however, we take the other view and regard the aim of humanism as the perfecting of the human being as such, and quite irrespective of the future life work, we shall not find a more favourable result for formal training. In this view training in so far as it is humanistic turns out the boy at the end of his course not as a good soldier or artist or man of business, but a good man. He is potentially whatever he may be required to be. He is a bundle of potentialities. He is not educated for this, that or the other walk in life. He is just educated ; that and nothing more. The power is there to be successful in any department that may be selected. He has an equal chance whatever his choice. Take the case of a man who is looking forward to a profession, say medicine. If he follows the advice of the humanist he will make no special preparation for his professional work till he has taken a first degree in arts. Then he expects to begin his professional work on equal terms with the man who has taken a first degree in science, the subjects to be selected in science being those that make a definite preparation for the medical course. There are those who maintain that as medical men, in the long run, the Bachelor of Arts will have the advantage of the Bachelor of Science. When pressed for a reason those who argue in this way usually maintain that the Arts Bachelor has had a wider course, and is more of an all round well-balanced man than is the other who has confined his attention to science all through his university career. To this argument no objection need be raised

—only it implies the surrender of the formal training principle. The Arts man is better because he has a wider range, not because he has been better trained. As a mere medical man the Science student is on the whole likely to be the better.

The present well-justified opposition to early specialisation arises not from any fear that the method is bad for the profession or occupation, but because it is held to be bad for the human being concerned. If formal training were possible in an ordinary sense of that term there would be no point in making a pupil limit himself to the study of certain specific subjects in order that he might acquire certain powers. These powers could be trained quite as well on the professional subjects, and there would be the great gain in knowledge implied in the concentration on matters that would be of vital importance to him in his life work. The present movement in favour of vocational education is all against formal training. The opposition to the movement comes mainly from those who are afraid that there will be an all round loss of culture. All our pupils will grow up to be excellent craftsmen, but men of a narrow outlook. The ideal of the vocational system has been said to be a glorified plumber. The cult of efficiency tends to lead to a state of affairs in which the individual is made more and more a means instead of an end in himself. The same tendency is to be noted at the highest rungs of the educational ladder, as well as at the lowest. The exaggerated specialisation in our modern scientific and even scholarly training leads to the same loss of general culture. Each man of science and each scholar is getting to be more and more circumscribed in his range. He no longer cares to take the whole of his subject to his province. With a certain haughty modesty he confines himself to one small section, and feels proud if he can, by making this section his own, contribute to the advance of the whole subject by supplying the necessary detailed knowledge.

Without doubt the advance of knowledge has been such that it is now impossible for anyone to master the whole

field of any one subject, but there is the danger that those who work up the necessary detailed knowledge may themselves lose touch with the broad issues that give their detailed study its value. There is apt to be a loss of that delicate sense of proportion that marked the old Greeks, and that is still the best criterion of real culture. The man who knows all that there is to be known about the antennae of the hemiptera and is ignorant of the broad principles and tendencies of biology, and the man who has exhausted the meaning and history of certain Greek particles but has lost grip of Greek Literature, cannot be said to be cultured.

It is in this connection that a new element is being gradually added to the connotation of Humanism. The term is coming to be used to cover this mastery of the broad general outlines of a subject that must go along with anything like an intelligent understanding of its real meaning. It is not that Humanism identifies itself with the work of the ante-specialism period, though, as we have seen, this is sometimes done in connection with the preparatory training for entering a profession. It is rather that Humanism seeks to permeate the whole of a given study with its spirit, and thus include the specialised part as well as the general. If a study is carried on in the proper spirit, the drudgery of specialism will be relieved by the wider outlook. The Humanistic spirit can glorify the drudgery of the laboratory just as it can the drudgery implied in pure scholarship, but is as often lacking in pure scholarship as it is in the laboratory.

We ought all to do our share of the spade work of our subjects, but we must not sacrifice the whole for the parts. We must be efficient in the particular branch of work that we take up, but we must none the less be efficient as mere human beings. The art of living is itself a vocation, and needs a training as specific as that for any of the recognised modes of earning a livelihood. Those in favour of vocational training in the ordinary sense set up the ideal of efficiency, and hold that only by beginning betimes can we attain the highest degree of effectiveness. Their opponents

usually maintain that efficiency is too dearly bought at the price of complete manhood. Why should we sacrifice all that makes life worth living merely in order to get means to live?

Nothing need be said against the cult of efficiency in itself. We are all interested in getting things done in the best way possible. But it does not follow that the recommendations of those who favour vocational training are without alternative. It is not necessary that we should segregate at the earliest possible stage those who are looking forward to particular branches of work. The technical school need not crush out the high school. It is generally admitted that a certain amount of purely general knowledge is essential to the beginning of technical studies, a knowledge that is not valued merely as culture but as a means toward an end. We have seen that Sir John Lubbock (Lord Avebury) speaks of certain subjects as "knife and fork studies," implying that they are necessary to the prosecution of other studies that in this connection may be regarded as dinner studies. The three R's are obviously knife and fork studies in relation to most of the other studies of the school. But many a subject may be either a knife and fork or a dinner subject, according to the use to be made of it. Botany, for example, is in an ordinary secondary school a dinner subject. It is studied for its own sake, for its culture value. In the case of a student who is studying for his medical preliminary examination, Botany is a knife and fork study. He desires to master it in order to use it as a means to help him in his professional work, particularly in the pharmacopœia. The vocationalists would treat all the subjects of the ordinary school as knife and fork studies in relation to the work of the technical school. The question is sometimes put from the purely vocational standpoint: How much time can be afforded in the ordinary school to make the necessary preparation of the knife and fork studies? The tendency to cut down the time of preparation is checked by the experience of the teachers in technical schools. Their general complaint is

that their pupils come up insufficiently prepared in the essential knife and fork elements.

There is a curious uniformity in the history of American colleges started for the teaching of agriculture. At first they begin with a severe limitation to the science subjects ancillary to the real business of agriculture. But soon the need for more general culture comes to be felt, and there is established a class for English, followed by one for English Literature, and to this are gradually added other culture subjects, till by and by the college has quite a fair general curriculum—in some cases indeed the college develops into a complete university. Admitting the influence of that powerful inherent tendency, which all institutions have, to extend their borders as a mere matter of aggrandisement, there remains the fact that the necessities of the case demand that a certain amount of literary training should be supplied in order that the technical work may be satisfactorily done. Some would meet the case by lengthening the preparatory course so that students during their technical training should be freed from general subjects. Others see an advantage in the combination of general with technical subjects during the vocational training. Still others see a solution to the problem in a combination of the vocational with the general at what is usually regarded as the purely preparatory stage. Dr. E. Davenport believes it to be our duty "To see to it that no individual shall be obliged to choose between an education without a vocation and a vocation without an education."[1] His view is that the High Schools should include certain vocational elements so as to prevent a schism between them and the purely technical schools. He maintains that at the present moment in the United States the people have the choice between a dwindling high school where *pure education* is carried on, and a flourishing high school in which the vocational has its legitimate place. In his own words:

"There is no class of occupation that is followed by large masses of people that I would not bring into the high school and

[1] *Education for Efficiency*, p. 60.

teach as fully as circumstances would permit, and I would compel every student to devote not less than one fourth and not more than one half of his time to these occupational lines."[1]

Looking at the matter from the point of view of a very practical people Dr. Davenport has no fear on the score of the vocational: his fear is entirely on the score of the cultural. The alternative to his scheme of introducing the vocational into the high schools is the establishment of a great system of trade schools in which education as popularly understood will be reduced to its minimum, in favour of vocational training. On the side of this extension of the curriculum of the high school is the argument used by Professor Hanus of Harvard, that at present a ridiculously extravagant amount of time is spent on the knife and fork studies. These are the more quickly mastered if they are at once introduced to their work on the dinner subjects. So intimate is the connection between the purely mechanical processes and the material upon which they are exercised that we have expert evidence to show that concentration on the merely mechanical is a positive hindrance to the cultivation even of the mechanical. The Inspector, Mr. Moseley, in his report on Dean Dawes' King's Somborne School tells us that:

"Here where so many other things are taught besides reading, the children are found in advance, in reading, of other schools, in the majority of which scarcely anything else is taught."[2]

And again:

"The singular slowness with which the children of our national schools learn to read is in some degree to be attributed to the unwise concentration of the labours of the school on that single subject."

Applying the same principle to subjects a little more complicated, we are prepared to find that certain subjects are learned more rapidly because they are immediately applied to some practical end. Over and over again the

[1] *Education for Efficiency*, p. 68.

[2] Quoted by Sir John Lubbock (Lord Avebury): Addresses, p. 71.

professional teacher finds this illustrated in the correlation of the various school subjects. The aim of the high school should not be to differentiate men and women according to their future life work, but to differentiate their capacities as human beings. Dr. Davenport puts his ideal in the following words:

"I would have it so that in a company of American citizens one cannot tell by the dress, the manners, or the speech what is the occupation of the individual. To this end let there be few schools with many courses, not many schools with few courses." [1]

It is doubtful whether this is a desirable ideal. Why should we hurry on that tendency towards uniformity that is already so conspicuous in our social life. There is no harm in our bearing certain signs of our life work so long as they do not obtrude themselves, and interfere with our full and free development apart from our vocation. Dr. Davenport is right in claiming that the educand must get an opportunity of mixing with human beings as human beings, and not as human beings specially modified in this, that or the other way. A liberal education must mean now, as it has always done, an education that deals with man as man, not with man as a functionary. The seminarist ideal of training is essentially instrumental. It seeks to produce a man of a particular type to serve a particular purpose in a community.

It is interesting to observe that the educator himself as a professional man has been made the subject of discussion from this very standpoint. In England, and in many other countries, Training Colleges have taken the form of seminaries. Their relation to the church on the one hand and to the state on the other has emphasised the idea of the young teachers being people set apart. Of late years there has been in England a movement to widen the outlook of elementary teachers, not merely by giving them the subjects of a University training, but by placing them in the universities where they have to mix with the students who

[1] *Op. cit.* p. 100.

are being prepared for other walks in life. Stress is wisely laid on the fact that it is not so much a matter of subjects as of contacts.

But taking the professional educator on the other side, that is, with regard to the actual subjects he has mastered, we find him in a peculiar position. In a large number of cases his equipment is made up of humanistic subjects. The subjects that are in themselves cultural are in his case the material in which he works. They are his stock in trade. We have agreed that the member of another trade or profession ought to have an acquaintance with those humanistic subjects in order to balance his special knowledge and to keep in touch with his fellows on a broad common basis. But how does the educator fare? Can he claim to be a cultured man when he has no knowledge beyond what is supposed to be common to all men? Is the specialist in humanity any broader than the specialist in anything else? Probably it will be admitted that the schoolmaster knows his subjects in a way different from the ordinary educated person. The professional man of forty knows his Latin, his History and his Rhetoric in a different way from the schoolmaster of the same age. It may perhaps be permitted to say that the schoolmaster knows those subjects at that age more fully and accurately than does the ordinary professional man. The chances are that he would not be allowed to say that he knows them better, for the outsider would in all probability claim that there is a narrowing influence in the schoolroom, and that the man of the world knows his humanities in an enriched way through his continued application of them in real life. The very accuracy with which the schoolmaster knows his subjects is used against him as a term of reproach. It is because he speaks so authoritatively on subjects that are supposed to be the common property of educated people, that he has earned the reputation that is usually associated with the word *pedant*. The lawyer and the doctor are as dogmatic as the schoolmaster when they are dealing with their own subjects, but as we are not supposed to share their

knowledge of the details of their professional work, we do not feel aggrieved, and no sneer is used.

Take the case of an accomplished and successful artist. Does he enjoy art more or less than the average cultured amateur? So complicated is the problem that we have to be careful to explain away the evil connotation of some of our terms. We mean a genuine artist, and we do not mean a pretentious and ignorant amateur. With these explanations it may still be claimed that the artist has a joy in his work equal to that which the amateur can have from it. On the whole, the bias is in favour of the artist having the higher cultural advantage. There is no reason why the conditions of the case should be altered with the schoolmaster, except that he is continually dealing with the same set of materials, and therefore is likely to become stale. There is here certainly a danger for the teacher, but he can take measures to keep himself fresh by such changes in subject-matter as his conditions permit. It must not be forgotten, however, that the teacher has always another source of interest. He has not merely the intrinsic interest of his ordinary subject-matter. He has the charm of seeing how the same matter appeals to different minds. To balance with other professional men he ought certainly to cultivate some region of humanistic work that does not fall within his professional scope. But even within that scope he will always have a deeper humanistic interest than the outsider can possibly have, for he is not only teaching humanistic, but teaching it to humanity.

CHAPTER IX

NATURALISM

THROUGHOUT the *floruit* of Humanism it may be said that Naturalism had been held in leash. Since it is itself one of the extremes towards which Humanism tended, it had in the earlier stages of the humanistic movement quite a fair influence on educational theory. But after it had passed its zenith Humanism tended steadily towards the other extreme, pedantry; so that Naturalism gradually lost ground, and as a consequence went into opposition, and at length gathered sufficient strength to deliver a direct attack on the bookish ideals towards which Humanism had drifted.

As we have found that Humanism and Realism have special meanings in education as compared with those they bear in general philosophy, we are prepared to find that Naturalism also has its special signification. In theology, for example, it is opposed to supernaturalism, and represents the point of view that insists upon finding a reasonable explanation of all events that are commonly regarded as involving the miraculous. In philosophical writings the term is usually opposed to idealism or to rationalism. Here it stands for the principle of supplying an explanation of all the facts of experience by reference to the ordinary laws of physical science, and is therefore practically identical with materialism. The identification is very pardonable in view of the important position assigned to nature in the materialistic systems, but it is not of the essence of the connotation of Naturalism in philosophy,

which, as indicated by Professor Sorley, may be "best defined negatively, as the view that denies to reason any spontaneous or creative function in the human constitution."[1] Reason of course is present, but its function is merely to manipulate the various presentations and feelings that arise independently of it.

There are other more general ways in which the term Naturalism is used. For example, it occurs in connection with mediaeval times to indicate that lower view of human activities and aspirations that is contrasted with the symbolism and romance of the age of chivalry. The phrase "the natural man" as found in the Bible, corresponds to this mediaeval reference, and the sinister connotation is a sufficient indication of the point of view involved. Obviously everything depends upon the view taken of the nature concerned. In education, for example, the term is nearly always used with reference to a nature that is, if not entitled to the adjective "higher," at least such as to justify itself by the very fact that it can be said to be natural.

In educational writings, the term is very loosely applied. It is generally used to indicate a system of training that does not depend so much upon schools and books, as upon the regulation of the actual life of the educand. The technical view may be gathered from a passage in which Mr. Oscar Browning contrasts it with Humanism and Realism. Compared with these, Naturalism

"is not in the first instance study at all. It is an attempt to build up the whole nature of the man, to educate first his body, then his character, and lastly his mind."[2]

Though this represents fairly enough a common use of the term, it is somewhat vague, and involves a rather

[1] *Ethics of Naturalism*, p. 10. This view, however, involves certain difficulties, since, if it is true, we would have to call *all* English philosophers up to Green, by that name: for I do not remember that in any of them we have any idea of reason as constructive. Besides, the term as used in philosophy is fairly modern.

[2] *Monographs of the Industrial Education Association*, vol. i. No. 5, p. 131

arrogant appropriation of *nature*. Obviously all educational systems must have to do with the nature of the educand, and we shall find that the idealists, for example, are just as keen upon following nature as any professed naturalist can possibly be. But the name has become associated with a particular school, and we must consider it in the light of that fact. Perhaps the *differentia* of this school as compared with the others that also profess to follow nature may be found in the fact that its real cry is "*back* to nature." It assumes that we have fallen away from what is natural, and that we must be restored to the state which we have lost. It is therefore largely destructive in its teachings. We are called upon to break down certain artificial barriers and get back to a happier state from which we have fallen. The sophistication of the later stages of Humanism supplied an appropriate field for this form of Naturalism, and as a matter of fact, in the History of Education it is usual to regard Naturalism as coming third in a series, the first two terms of which are Humanism and Realism. We have seen that Naturalism was present in the earlier stages of Humanism, and aided in the attack on Scholasticism, but there is this justification for the ordinary chronology that the most prominent naturalist made his appearance, just when the struggle between Realism and Humanism was dying down, leaving educational theory in a very exhausted state. The position of affairs at the end of Scholasticism was repeated. Formalism was once more rampant. Book learning had done its best, and had been found wanting. There was need for a new movement.

Without doubt Naturalism in education came to its zenith in the reaction associated with the name of Jean Jacques Rousseau. How far he was sincere in his preference for the natural man is very difficult to determine. His whole theory of education, however valuable it may be in itself and however much truth it may include, was in all probability in its origin nothing more than the reaction of his temperament on his surroundings. That tempera-

ment belongs to the class psychologists call *contrary*. His was one of those natures that have a constitutional bias towards contradiction, and particularly towards a vigorous opposition to the existing order of things. The chance of a prize competition directed him to the consideration of the relation between the development of society and the result in moral progress. His temperament drove him to accept the less obvious of the two possible alternative positions.[1] This inevitably led to the views adopted in the *Émile*.

Nothing could better illustrate the man's contrariety and love of paradox than his own description of the purpose of this book. Although it bears upon its title page the words *Émile, ou de l'Éducation*, we find him writing about it, two years after its publication, as follows:

"You say very truly that it is impossible to form an Émile: but can you believe that *that* was my aim, and that the book that bears this title is a treatise on education? It is a philosophical enough work on this principle, put forward by the author in other works, that man is naturally good.

"To reconcile this principle with that other not less certain truth that men are bad, it was necessary in the history of the human heart to show the origin of all the vices. That is what I have done in this book, often accurately and sometimes with sagacity."[2]

Here we have a sinister but useful light to guide us in dealing with the educational theories of Jean Jacques Rousseau. He is interested not so much in producing a

[1] He certainly did not need Diderot's advice, even if it is true that he was offered it. We cannot imagine him taking up the orthodox view.

[2] Extrait d'une lettre de J. J. Rousseau à son libraire Ph. Cramer, datée 13 Oct. 1764.

"Vous dites très bien qu'il est impossible de faire un *Émile*: mais pouvez-vous croire que ç'ait été là mon but, et que le livre qui porte ce titre soit un traité d'éducation? C'est un ouvrage assez philosophique sur ce principe avancé par l'auteur dans d'autres écrits, que l'homme est naturellement bon.

"Pour accorder ce principe avec cette autre vérité non moins certaine que les hommes sont méchants, il fallait dans l'histoire du cœur humain montrer l'origine de tous les vices. C'est ce que j'ai fait dans ce livre, souvent avec justesse et quelquefois avec sagacité."

good man as in explaining how a child, who by hypothesis begins well, generally turns out badly. It follows, therefore, that education is treated in the *Émile* as an explanation of an apparent inconsistency between two theories that Rousseau desires to reconcile. For his purpose it was necessary that, whatever happens, the system of education that had maintained up till his time must be proved to be bad. Were this not so it would be difficult to explain why the naturally good child should develop normally into the corrupt man. We need not be surprised, therefore, to find a universal condemnation of educational process as hitherto conducted. His normal attitude is represented by his recommendation: "Take the road directly opposite to that which is in use, and you will almost always do right."[1] Nothing could have a more depressing effect upon an honest reader than this consciousness that his author is working for a theory, and not for the good of that humanity for which he appears to be so enthusiastic. We are not discouraged merely because he condemns the present system. Pestalozzi, in a passage that few of his commentators fail to quote, expresses Rousseau's negative point of view by comparing educational reform to a coach that does not so much need better horses as to be turned right round and started on a new track. But we do not resent this criticism, since Pestalozzi's interest is in following the new track rather than in abusing the old one.

The question remains: which is the true view of the nature of the *Émile*, the view that Rousseau himself expresses, or that which the intelligent reader takes of the book on its merits? Rousseau is so little to be relied upon that even his own explicit statement cannot be at all accepted as final. Was Voltaire right when he exclaimed: "The man is factitious from head to foot," or are we to believe Jean Jacques' admirers who maintain that sincerity is his characteristic quality?[2] It is quite possible that his

[1] *Émile*, Ed. Lahure (1856), bk. ii. p. 469.

[2] Cf. Gabriel Compayré, who in his excellent little monograph on Rousseau says: "Behind the writer and thinker, we feel the pulsations

remark to Cramer was merely a petulant rebuke for some unpalatable criticism; but on the other hand it may be his paradoxical way of indicating the essential oneness of all his writings. It is significant that he speaks contemptuously of "those who only judge of books by their titles."[1] As he points out that the *Republic* is not a work on politics, but "the finest treatise on education that has ever been written," so he may wish us to understand that he prefers his *Émile* to be regarded rather as a philosophical treatise, than as an educational. In any case, we may take it for granted that the book itself could not have had the unique and lasting influence that it has exercised, if it were but the special pleadings of an irritable egoist. Whatever be the weaknesses of the author as a human being, he was a power in directing human thought. The writer as writer was nearly always working infinitely above his own level as man.

If there be any truth in the doctrine that in the history of education there is a certain rhythm according to which systems rise and fall, it would seem as if Naturalism supplied an attractive form of reaction at any time from a system that has exhausted its mandate. One is tempted to suggest that there is a regular alternation between positive and negative education, where *negative* connotes merely the opposite of whatever is understood by positive. Rousseau himself has a rather technical meaning for these two terms. In his letter to A. Christophe de Beaumont, Archbishop of Paris, he expresses his views very clearly:

"I call positive education that which tends to form the mind prematurely (*avant l'âge*) and to give to the child the knowledge of the duties of the man. I call negative education that which tends to perfect the organs, the instruments of our knowledge, before giving knowledge, and which prepares for reason by the exercise of the senses."[2]

of the most sincere heart that ever throbbed in the breast of man." See also Harald Höffding's estimate in his *History of Modern Philosophy*, vol. i.

[1] *Émile*, Ed. Lahure, Tome i. bk. i. p. 415.

[2] Edition Lahure (1856), Tome ii. p. 343.

Rousseau's education is of course negative.[1] As he tells us himself in his treatise on the Government of Poland: "I can never say often enough that good education must be negative." He is unaware, however, of a certain danger of misunderstanding in this word *negative*. The reader is apt to think that it implies the negation of education, and when he comes across some of Rousseau's paradoxes about learning how to lose time wisely,[2] he may think that his suspicion is not ill-founded. Accordingly, in the letter to de Beaumont, Rousseau takes care to add:

"Negative education is not idle (*oisive*), far from it; it does not give virtues, but it prevents vices; it does not teach the truth, but it guards from error; it inclines the child to everything that may lead him to the true when he is in a position to understand it, and to the good when he is in a position to love it."

Here there is hardly a clear antithesis between the positive and the negative. Throughout the *Émile* we find the educator and the educand doing things all the time. No doubt they are not the things that were being done at the same period by other educators and educands, and to this extent Rousseau is right in calling his education negative. The use of the term is, therefore, purely relative.

There is another kind, or rather aspect, of education that seems at first sight at any rate to have a greater claim to the adjective *negative*. Those systems of education that are based upon the theory of the innate depravity of the educand, and that give themselves over to inventing ways of preventing him from acting as he naturally would, may fairly claim to be negative. But here too the term is relative to the view taken of the nature of the educand. Though the Jansenists and the trainers of monks are not usually included among the naturalists, they have quite a good claim to rank there. It all depends upon the kind of nature the classification has in view. But leaving out of account the extreme case of those who believe in total

[1] *Émile*, Ed. Lahure (1856), Tome i. p. 469.
[2] *Ibid.* Tome i. p. 468.

depravity, and who therefore cannot be said to educate according to nature, there remains that form of education that consists in inhibition. We are so much dominated by the notion of drawing out the qualities of the educand that we are apt to forget that this drawing out process represents only one aspect of the educator's work. He has to repress as well as encourage. The point is well made by Professor Lange of Copenhagen:

"The end of education is always to teach the individual to dominate, to subdue, to annihilate the impulses which are the immediate effect of his physical organisation, but which are not in keeping with his social relations. Regarded from the physiological point of view, one would say that education has for its end to suppress the simple and original reflexes, or to replace them by higher ones. Accordingly, from our earliest childhood we are trained to govern our emotional reflexes in so far as these are not admissible in polite society."[1]

But even so we are not limited to a negative attitude in general. If we suppress certain original activities of the pupil the ultimate purpose is to draw out certain others that are there, and are, from the educator's point of view, of higher quality. From this standpoint education may be said to be a process of selection by which certain possibilities are aided in their efforts to realise themselves by the deliberate suppression of other possibilities. This involves all manner of assumptions regarding the nature of the educand, and the powers of the educator that need not to be dealt with here.[2] At present the important point is that even this process of repression may be regarded as in a sense positive in its function.

It seems safer then to set apart the term *negative education* to the education that for any particular time is in opposition. Auguste Comte's system of education does not form an exception. It is called positive merely from

[1] *Les Émotions*, Edition Alcan, p. 140.

[2] The point at issue can be very well illustrated by a reference to Professor Royce's *Outlines of Psychology* where the whole scheme of development is dependent on a system of selection and inhibition.

its connection with his philosophy. Its essential qualities are probably better expressed by the term *integral*, which has been actually applied to it.[1] Every new system of education naturally begins by an attack on the system at the time in power. It is this fighting tendency that has given such currency to the term "Educational Reformers." Used originally as the title of an excellent book by R. H. Quick, the term has by its appropriateness won its way into college class-rooms and examination papers. A student who would never think of calling a philosophical writer a reformer will quite naturally apply this epithet to a purely non-professional writer on Education, say Montaigne.

Further, as the reformer nearly always opposes a well-established system that has had time to elaborate its methods, it is very reasonable that there should be an appeal for greater simplicity. Above all, there is the desire to sweep away all the paraphernalia of books and shibboleths. In other words, this means a return to a more natural form than that attacked, and it is an easy transition from "more natural" to nature, plain nature. Thus the current reaction in America in favour of vocational education is largely an attack upon the present too literary system. The innovators, as is to be expected, believe that it is more in accordance with nature that young people should be learning to make a living than that they should spend their time acquiring knowledge that will never be of any practical service to them. This happens to be a utilitarian view, but the utilitarianism of it is non-essential, so far as its claim to be naturalistic is concerned. A workshop is regarded as more naturalistic than a schoolroom, and an open air school cannot be denied to be so. The best fighting adjective to apply to a system that one attacks is *artificial*. This may be made to lead up to the system we seek to favour, which by contrast must appear to be natural. There is something of all this to be observed in the working out of Rousseau's great book.

[1] See p 189.

The very first sentence of the *Émile* supplies the key-note of all that follows: "Everything is good as it comes from the hands of the Author of things, everything degenerates in the hands of man." There is a ring of Bishop Heber in all this. Everything else seems to be good, "and only man is vile." But even man, as we gather from what follows, begins well. It is only when he comes into contact with his fellows that he starts to go wrong. Rousseau obviously approves of the text: "God made man upright, but they have sought out many inventions." The savage is "noble" compared with the civilised man, *l'homme policé*[1] of the d'Holbachian psychology. Unfortunately it is only too easy for Rousseau to find examples of corrupt societies, and he does not look too closely into the case of the noble savage. He prefers to take on trust the romantic view represented by Dryden's "when wild in woods the noble savage ran" to the correction conveyed by Walter Bagehot's version "when lone in woods the cringing savage crept."[2] To one living like Rousseau among the blighting influences of a specially corrupt society, there was something very attractive in the simplicity of the uncivilised man, so long as this simplicity was admired at a sufficient distance. There was therefore a ready-made welcome awaiting Rousseau's cry of: Back to Nature. In many ways the advice was sound, and as sound to-day, and as popular, as it was then. In many directions his protests produced excellent results, notably in the matter of rearing infants. But along with much practical advice there was a good deal of nonsense, and confusion of thought.

The words *nature* and *natural* have a misleading air of simplicity about them. As a matter of experience they give rise to endless confusion, particularly in writing on education. There is a tendency, to which we are all prone, to make a partisan use of the word *natural*. Whatever

[1] "Celui que l'expérience et la vie sociale mettent à portée de tirer parti de la nature pour son propre bonheur." *Système de la Nature*, chap. i.

[2] *Physics and Politics*, p. 55.

strikes us as right and reasonable, we are apt to call *natural*, and reserve the epithet *unnatural* for anything of which we greatly disapprove. As a rule the customary meets our favour, and therefore strikes us as natural: the unusual, on the other hand, is apt to repel us and to suggest to our minds that it is against nature. Nothing could better illustrate the ambiguity underlying the two terms than the fact that the positive and negative adjectives can be logically applied to the same person. A man may be at the same time a "natural son" and an "unnatural son." Accordingly, it becomes of importance to determine the various meanings of *nature* in order to keep our thinking as clear as possible.

There are three important meanings of the term *nature* that deserve the attention of the educator.

We have first of all the nature that underlies individual things or concepts. When Napoleon says that it is of the nature of a giant to squeeze, or Dr. Watts tells us that dogs fight because "'tis their nature to," we perceive that by nature is understood the inherent quality, that which is an essential element in giants and dogs. Squeezing and fighting are parts only of the nature, but when we have all the qualities that are essential to giants and dogs we have the natures of these creatures. The *Socratitas* of the Schoolmen expressed the complete nature of Socrates. As is to be expected, Aristotle sets forth this view of nature with particular clearness:

"What every being is in its perfect state, that certainly is the nature of that being, whether it be a man, a horse, or a house: besides its own final cause and its end (τέλος) must be the perfection of anything."[1]

The materialists naturally take a more mechanical view, as is seen in d'Holbach's definition of the nature of any individual being:

"The whole that results from the properties, the combinations, the movements, or the modes of acting which distinguish it from other beings."[2]

[1] *Politics*, i. 2, § 8.

[2] *Système de la Nature*, chap. i.

In both definitions we are dealing with a resultant. There has been process, and the result of the process has in each case been defined. To get a true idea of anything we must consider it in relation to function; we have to consider not merely being but becoming. The nature of the being is really the laws that determine its final form. In the case of living beings the nature is the law of their development. In the older fashioned text-books on Zoology animal types were studied in their perfect form, and were defined accordingly. This appears to be in accordance with the Aristotelian definition of the nature of the being. But the modern text-books are not content with this treatment of a static resultant. They include in the nature of the animal studied its process of development. The life history of the typical animal is given, and is considered essential to a complete conception of the nature of the animal. To get at the true nature of the butterfly we must study not only the imago, but the egg, the caterpillar and the chrysalis as well. The butterfly is not one or other of these, but all four in relation to each other. This organic view is implicit in the Aristotelian definition, since all that has gone before is gathered up and represented in the perfect form. But for our purposes it is well to have the process definitely stated. It is quite clear that if we are to understand what human nature is, we must be able to include the different processes in its development. The educational application is very obvious. The nature of the educand must be studied both in its process and in its result.

The recognition of this meaning of the term *nature* as applied to the educand, marks an important advance in the evolution of educational theory. Rousseau gets credit for being the first thinker on education who definitely accepted what Dr. Stanley Hall calls the paidocentric attitude. Hitherto the stress has been laid upon the state for which the educand was being prepared, or upon the subjects he was to study. Now for the first time the pupil himself comes into the limelight. His nature acquires an import-

ance that it never had before in the history of educational theory. There is no need to deny that Rousseau has done all that is claimed for him in the way of popularising the paidocentric attitude, but it is too much to say that he introduced it. Quintilian pays considerable attention to the nature of the educand, and correlates his qualities with the results to be produced by education. Roger Ascham makes a careful analysis of a "good witte" in a boy,[1] an analysis that in his turn he carries back to Plato.[2] This makes us pause when we are invited to give all the credit to Rousseau. Then on the practical side the Jesuits were in the field long before him. To be sure they paid special attention to method, and their attention to minute details in this branch rather tends to obscure the fact that they made the educand himself the centre round which their methods worked. In his genial vague way Comenius himself does not neglect the educand, but his intentions fell far short of being carried into effect. It is to the lasting credit of the Jesuits that they not only realised but acted upon the realisation that the first problem for the educator is to know the educand, and to fit in everything into that nature once it is known. Still, to Rousseau remains the not insignificant credit of making the world realise the importance of the changed attitude towards the educand. The Jesuits were not concerned to proclaim their discoveries. They were practical educators who sought the best means of carrying on their professional work, so it was well that a Rousseau was found who could rediscover paidocentricism for himself, and then make the world share in his discovery.

The second main meaning of the term *nature* is very complex. In a general way it may be said to be the antithesis of art : the natural as opposed to the artificial. There is often great confusion here. One aspect of nature is sometimes marked off from another as being more natural. A countryman's smock is supposed to be

[1] *The Scholemaster*, Arber's Reprint, p. 38.

[2] *Republic*, vii. 535.

more natural than the stockbroker's frock coat, a jungle more natural than a garden. The division of labour suggested in Cowper's

"God made the country, and man made the town"

is implied in much of this talk about the natural. It is forgotten that God counts for a good deal in the making of the town: that though man causes a considerable difference in the appearance of the world, he does not make it less natural. It is of course quite a reasonable convention to limit *nature* and *natural* to things that are independent of man's influence, and to regard man and nature as opposing forces. "Man's conquest of nature" is quite an intelligible phrase. But while this view of nature is common in certain educational writings, it is not consistently maintained. Nature is being continually used to mean something beyond that part that is opposed to human influence. The conventional meaning alternates with another in which it is assumed that nature implies what is inherent in men and things, and what is therefore right and fitting. The "nature of things" is a phrase that conveys quite a clear conception to most minds. The unreflective consciousness is apt to read into the nature of things not merely a statement of things as they are, but also a suggestion that they ought to be so and not otherwise. All this is reaching out to the third and widest view of nature which will be treated in its turn. In the meantime we can probably best present the contrast between nature and art by dealing with the educational aspect of the domain of Pan, the country as opposed to the town. This usually takes the form of a more or less poetical conception, and lends itself to personification. The educational reference is mainly hygienic and cultural. Nature study is granted a special place in the school curriculum, and is treated as having quite a special moral effect. The educand is set to study the workings of Nature, and to enjoy her marvels; but all the while he is being brought into the attitude that "looks from nature up to nature's God."

It takes the melancholy Jacques to do full justice to the educational aspects of this view of nature. Dr. F. H. Hayward sometimes gets angry with sentimental educators like Froebel, who read into this view of nature things that are not there; and he regards as positively mischievous Wordsworth's overworked lines:

> "One impulse from a vernal wood
> May teach you more of man,
> Of moral evil and of good,
> Than all the sages can."

He points out with some justice that educators are often led away by the swing of the lines into believing that they convey a definite meaning, whereas they are "onesided and almost nonsensical."[1] We can get inspiration from the country, and from nature in this sense we may learn much. But it will not do to make a complete separation between nature and man, and then send us to nature to learn about man. If we want to know men we must go where men are, we must study men and not content ourselves with trees. We are not to forget Socrates' reply to Phaedrus, who twitted him with staying too much within the gates of Athens:

> "The reason is that I am a lover of knowledge, and the men who dwell in the city are my teachers, and not the trees or the country."[2]

To attain to a state of nature we must be not only remote from towns, but also remote from the present. Both time and space are involved. When we want to get back to the state of nature we must not only seek the picturesque setting of an arcadia, but we must carry ourselves back to a period when men lived in a state of primitive simplicity. It was in this state that Rousseau would fain be, and his noble savages make a fitting complement to the peaceful background. But it is to this same state that Hobbes goes back for his beginnings, and the belligerent humans that

[1] *Educational Ideas of Pestalozzi and Froebel*, p. 14, footnote.

[2] *Phaedrus*, 230, Jowett's English.

he finds in their state of nature, with every man's hand against everybody else, rather spoil the harmony. It is evident that either the state of nature is not uniform, or that there are several states of nature, of which Rousseau has chosen a pleasant one, and Hobbes an unpleasant. It is not that Rousseau's men are any better than Hobbes' men, but merely that they are chosen at a happier moment of their development.[1] Hobbes' men begin naturally, but they soon become artificial.

"Nature (the art by which God hath made and governs the world) is by the art of man, as in many other things so in this also, imitated that it can make an artificial animal."[2]

But whereas Hobbes' men become all the better for the artificiality they acquire, Rousseau's get steadily worse. "Rousseau's nature was a pig-sty, but Hobbes' state of nature was far worse than that."[3] In both cases the nature of the men has changed, for each set of men must still have a nature, though it is now called artificial. The truth is that sufficient allowance is not made for the varieties of nature. The old Stoics recognised that there was a nature of the cosmos as well as a nature of man, and further, that even in human nature there is a higher and a lower, and indeed that in the higher nature itself there are grades. The passions are lower than the reason. "The thief and the murderer follow nature just as much as the philanthropist."[4] The cosmic process has been carried on largely by the lower nature. "Social process means the checking of the cosmic process at every step, and the substitution

[1] Schopenhauer puts the problem: what would happen if two men living in the state of nature met each other for the first time? This is the answer he supplies: "Pufendorf glaubte sie wurden sich liebevoll entgegen kommen; Hobbes hingegen feindlich; Rousseau sich schweigend vorübergehen." *Werke*, Ed. 1874, vol. vi. p. 245.

[2] Hobbes' first sentence in the Introduction to his *Leviathan*.

[3] W. G. Pogson Smith: *The Philosophy of Hobbes*, Introduction to the *Leviathan*.

[4] T. H. Huxley: *Evolution and Ethics*, Romanes Lecture (1893), p. 31

for it of another which may be called the ethical process,"[1] and this results in a survival of the ethically best. Man's higher nature repudiates the gladiatorial theory of existence, and his educational processes tend to secure "not so much the survival of the fittest, but the fitting of the greatest possible number to survive."[2] Here we have the higher moral ideal being realised in spite of nature. The microcosm opposes and rises above the macrocosm.[3] We have now reached a stage at which the antithesis between nature and art is lost in an antithesis between subjective and objective nature. We must accordingly seek a wider meaning in which the two states of men, the natural and what is called the artificial, may be included and explained.

The third meaning of nature is really an extension of the first from individual beings to the wider sphere of the universe. What is true of the individual organism is true of the organic whole of the universe. This all inclusive nature of which we are parts, and which has a spiritual basis of some kind or other, is described even by the materialists in such a way as to imply both movement and purpose:

"Thus nature in the widest sense is the great whole which results from the assemblage of the different matters, of their varying combinations, and of the changing movements that we observe in the universe."[4]

This wider view of nature includes not only individuals but also that picturesque form in which man and nature are opposed to one another. Since this wider nature is no longer distinguished from, but includes human nature, art itself becomes natural. The conception is dynamic. Nature is a process. The world spirit expresses itself in nature. Since in this sense nature includes humanity, the

[1] T. H. Huxley: *Evolution and Ethics*, Romanes Lecture (1893), p. 33.

[2] *Ibid.* p. 33.

[3] For an exposition from the idealistic standpoint of these two natures see Edward Caird's *Evolution of Religion*, vol. i. p. 372 ff., where he deals with the universalising principle of Stoicism.

[4] *Système de la Nature*, chap. i. (d'Holbach).

development of humanity is a part of the natural process. This is the nature that so many of our distinguished educators call upon us to follow. We are to observe nature with diligent and loving eyes, and learn of her. We have to study her methods and base our own upon them.

The realm of nature is conducted after a methodical fashion. Certain general laws can be discovered as applying in the most diverse ways and among quite different materials. This is what gives meaning and importance to analogy—this discovery of the same law acting under different circumstances. The proper law to apply under given conditions is often sought and sometimes found in an appeal to analogy. If nature acts thus and thus under certain known conditions, then we ought to apply the same principle to our present conditions, in so far as these correspond to the conditions already examined. Many of our best philosophers work largely with analogies: but obviously everything depends upon the care with which the parallelism of the two cases is observed and maintained. One of the most notorious sinners in this respect is John Amos Comenius, whose *Didactica Magna* is full of quaint misapplications of natural analogies. He is not usually ranked as a naturalist by the historians of education, but in the following of Nature he has no rival, when it comes to detailed working out. His plan is to state a principle that he finds in operation in nature: then to indicate the way in which this may be imitated in education: next follow remarks on deviations from the principle: finally, in some cases, there are suggestions for rectification. He succeeds in getting examples from nature to illustrate all the points he wishes to make. But he is not particular regarding the consistency of his recommendations, or the natural reactions by which he seeks to justify them. Sometimes the principle is so obvious as to be useless. "Nature observes a suitable time," rouses no opposition, and but little interest. "Nature never compels anything to advance that is not driven forward by its own mature strength." Here we have a statement that is not very

clear in meaning, and that certainly does not justify the deductions drawn from it. "Nothing is produced by Nature of which the practical application is not soon evident," is a statement that would bring comfort to the Naturalist if only he could accept it as true. The fact is that on the Comenian method we could find justification for any human activity, moral or immoral, by making a judicious selection from Nature. When the sluggard takes good advice and goes to the ant, he certainly follows nature, and all is well; but the recalcitrant sluggard who goes to the chameleon in the Reptile House at the Zoological Gardens and learns of that lethargic creature, has the same authority for his reprehensible practice.

The advice to follow nature has indeed to be accepted with great discretion. Blind following is in the highest degree dangerous. To begin with, it is to be taken for granted that a literal following of nature is not even suggested. "Nature red in tooth and claw" is too clear a danger beacon to be disregarded. Were we to follow natural methods in their entirety we would in a few generations succeed in thrusting humanity back into that state of barbarism from which it has emerged at the cost of such a long and painful struggle. But does this not imply that somehow or other we have got outside of the pale of nature, and that our modern social methods are unnatural? Nature has different methods at different stages, and what is wanted is that we should study nature as a whole, in order to get at the laws that underlie and give meaning to her methods; and then make the necessary modifications that circumstances demand.

In all this we have the tacit assumption that man is more or less of an outsider. He is an interested spectator. No doubt in so far as he is material he forms a part of the general system, but there is the implication that somehow or other he is able to be in the world and yet not quite of the world. As a self-conscious being he stands outside of the whole system, and is able to criticise if not to influence it. Here comes the crucial point. For the impres-

sion conveyed by certain writers is that we can interfere with nature, but we had better not. Things are going excellently as they are, and the less we interfere the better. But if we must keep on doing things, what we have to do is to study nature's methods and apply the results by doing what we can to aid her in her processes. Now from one point of view it may be reasonably maintained that we cannot interfere with nature. We ourselves form a part of nature, therefore our actions are necessarily natural, and must find a place in her system. The new element of self-consciousness does not remove us from our place as a part of nature. It only gives us power to act in a different way from the other elements. Nature may use self-consciousness for her purposes just as she uses instinct. But it does not follow that her methods in the two cases are the same. In this wider sense room may be found for that opposition to nature that Huxley works out. We do not oppose nature, we merely give up a lower method for a higher. The meaning of development is that there is a gradual increase in the complexity of process with a corresponding differentiation of function.

This view of nature is of special importance in education, as it is the charter under which the educator ventures to interfere with the ordinary course of the educand's life. Many sociological writers make the mistake of assuming that what are called natural methods cannot be improved upon by man. In the struggle for existence as we find it in the animal world there is the completest scope given to the individual to fight for his own hand, and the deduction is made quite in the Comenian vein, that society must not interfere with competition. War is natural, and to seek to abolish it is going in the teeth of nature. The implication is that nature is either suprahuman or infrahuman. In any case humanity is excluded from it. In all this we are working on the lower plane, the plane of nature *versus* art.

Standing thus outside of nature we may regard evolution merely as her normal way of working. We have thus

introduced into nature the element of definite purpose: she is really though not nominally personified. The theological conception of a God behind nature, guiding and directing, is displeasing to some minds, so they pass the reins into the hands of Nature herself. She is regarded as a beneficent force striving definitely and deliberately towards certain goals. But since the idea of personality in any form is rejected by those who adopt this position, we have what is sometimes called the metaphysical view of nature. We do not have a fixed and immutable nature of things, but an active process, continually working out ends that become clear to us as they gradually develop. Nature is not so much a being as a becoming.

The resemblance between this purposive force and a personality is so close that there is always a tendency to personification, even when thinkers are strongly opposed to any such conception. Herbert Spencer is willing to stand or fall by nature. In fact he almost deifies her. One of his critics slyly remarks that "we note that he writes the word always with a capital letter."[1] Yet Spencer does not hesitate to plunge heartily into educational controversy. He is keen that we shall follow nature, but does not bring out the fact that we *are* nature. It helps us greatly to remember that the smaller whole of human nature is included within the wider whole of nature in general, and that the narrower is as natural as the wider. The real point of the injunction to follow nature is to be found in the relation between human nature and that wider whole of which it forms a part. What is natural and proper for the brute is not necessarily natural for man, though of course there is a large part of man's nature that is common to him and the brute.

Education is a compensating process evolved in the ordinary course of natural development, by which the exceedingly complicated environment for which the educand must be prepared may be presented in suitable form. The ordinary physical environment can be prepared for in

[1] G. Compayré: Pioneers in Education, *Herbert Spencer*, p. 44.

the ordinary way by natural reactions. But with the increasing complexity of the social environment there was, and continues to be, an increasing strain in the preparation of the educand. Natural reactions are not enough. Things are too dangerous and too complicated. The educand must be guarded against certain dangers, and must have an abbreviated preparation to meet the complexities among which he must live. In other words he must have a human education. In this, every so-called "natural reaction" should be utilised, but many artificial applications and contractions must be arranged so as to bring the educative process within workable limits.

In the *Émile* we find that Rousseau makes use of the term *nature* in all the three meanings that we have specially mentioned, but the prevailing meaning in the book is the totality of the native aptitudes. This totality begins well but soon gets corrupt, and can no longer be treated as that nature to which appeal may be made. A corrupt old sinner is not, properly speaking, unnatural. He may have a bad nature, but he has a nature of some sort. He can be called unnatural only in the sense that his present nature is inconsistent with the wider whole of nature of which he forms a part. But even if this sense be adopted, it is unfair to call the old sinner unnatural since, if Rousseau is to be believed, to be in sin is the usual condition, and therefore the natural one of all who have survived the higher things of uncontaminated youth. If it is to be used as a model, then, the nature that Rousseau wants must be sought in early youth. For the individual the first stage is represented in Wordsworth's *Ode on the Intimations of Immortality.* But when Rousseau comes to deal with society, nature must be regarded as the sum total of the instinctive tendencies of humanity before these have been falsified by intercommunication and opinion. Ordinary society is this nature debased and sophisticated, and Rousseau appeals from it to simple nature. But this after all amounts to no more than an appeal to the natural from the artificial: it is little more than a recoil from the complex

to the simple. Such reactions against the complexity of social life are chronic. The Brook Farm Community, where, in the early part of the Nineteenth Century, the "disciples of the Newness" fell back upon Nature, and the movement going on at present in favour of what is called the Simple Life, illustrate a form of reaction that is periodically recurring. There is an innate tendency to cry back to the simpler times of old. Rousseau was after all only following in the footsteps of Xenophon and Aristophanes. It is true that Rousseau carries his theory to greater lengths than his predecessors, inasmuch as he goes back from society practically to the individual. Emerson compared the Brook Farm Community to "a French Revolution in small," but Rousseau would like to go back to a still smaller community for his educational processes: a community of two, the educator and the educand.

It would be interesting to know at what stage of complexity nature began to be corrupted in human society. In any case the educator himself is assumed to have kept himself unspotted from the world. Family life is regarded with favour by Rousseau: farm life, and even village life are treated as free from reproach. Where, then, does the complexity reach the dangerous stage? It would be unfair to apply the old quibble of the sand heap to Rousseau's position. We have no right to ask him to tell us the exact number of thousands of people necessary to set up moral corruption. But we are entitled to ask for some guidance about the origin of the injurious moral reactions. Emile is certainly not a god, and priggish as he is we would not go the length of describing him as a beast. What then is his relation to the society from which he is separated as a boy, and into which he is to be introduced as a man?

The truth is that Rousseau has no definite theory on the subject. He has merely a vague, and not unfounded distrust of the over-refinements of the worn-out civilisation that was in his time working out its own regeneration; and as a consequence he cries back to the simpler ideals of the individual life. His excessive admiration for *Robinson*

Crusoe, the only book he would place in the hands of Emile, arises from the fact that it supplies, though in an illegitimate way, the compromise that he desires between the savage man and the civilised. Crusoe presents the unique example of a man living under savage conditions, but bringing to those conditions the intellectual, and some of the material, resources of civilisation. He forms a concrete exemplification of the assumption that Rousseau makes in his eulogy of the noble savage. If to the admitted simplicity of the savage life can be added knowledge acquired and handed down by generations of civilisation, we have an ideal to which few will take exception. But this is precisely what reversion to nature negatives. What can be done by the isolated man is not fairly illustrated by the case of Robinson. When he makes his wheel-barrow he accomplishes a notable success, for which he deserves all credit: but he does not invent the wheel-barrow. In his system of education Rousseau puts the educator in the position of one who, while possessing all the resources of civilisation, makes use of them to enable the educand to discover for himself what has been already discovered by the race. It takes two—Emile and his tutor —to do the work that Robinson did when he made his wheel-barrow.

In Rousseau's system, in fact, the tutor is introduced to supply the advantages of society, while the education is professed to be entirely according to nature. The tutor is a begging of the question, a living *petitio principii*. The difference between the savage and the civilised man lies in the fact that the savage as savage starts on his career on a lower level of nature (as opposed to art): he has few advantages himself, and he will leave only these to his offspring. The civilised man, on the other hand, begins practically where his father leaves off. From our present standpoint education justifies its existence by its power of storing up the gains of human progress. It is the business of society either as a whole, as in the case of the earlier stages, or by means of professional educators, when it has

reached a higher degree of organisation, to run the educand rapidly through the necessary elementary stages so as to enable him to catch up with his elders in the course towards perfection. The tutor in the *Émile* finds his work in providing for the boy those advantages that would have to be denied him were he really brought up on the natural method. So far from following nature his function is to interfere with it—his purpose being as Butler would describe it:

"To mend the gross mistakes of nature."

It is because nature is too severe that we must step in and break the force of her over-harsh discipline.

"Nature's discipline is not even a word and a blow, and the blow first; but the blow without the word. It is left for you to find out why your ears are boxed. The object of what we commonly call education is to make good these defects in Nature's methods: to prepare the child to receive Nature's education, neither incapably, nor ignorantly, nor with wilful disobedience; and to understand the preliminary symptoms of her pleasure, without waiting for the box on the ear."[1]

Rousseau makes no pretence of buttressing up nature's method. His method is nature's own. He does not interfere, as Huxley would do. He lets nature do her own work. To be sure he does his best to keep up appearances. The tutor is not to teach anything of his own initiative. He is to wait till he is asked. His function is to answer whatever questions it may occur to Emile to put. If this method were rigidly carried out, there would certainly be an approximation to the method of nature, for the natural boy is not eager to probe into the sort of matters that tutors are interested in, and at the same time is quite curious in directions in which the tutor is very unwilling to follow him. But in point of fact the scheme of education is not allowed to follow this simple line. The tutor is continually stimulating curiosity and gratifying it in the most profitable way. To all this no objection need be raised.

[1] T. H. Huxley: *Collected Essays*, vol. iii. p. 85.

As teaching it is often exceedingly good. The trouble is that it is not at all naturalistic in the sense that Rousseau wants us to believe.

The truth is that such a cataclysmic change as Rousseau proposes is impossible. We cannot return to nature in the way that he suggests. In all those cases in which there has been a deliberate attempt at a return to nature it has been accompanied by an unreality—even an artificiality—that defeated its purpose. The shams and excesses of society represent one thing, society itself another. The oscillation between the philosophical and the purely educational standpoint has exposed Rousseau to numberless inconsistencies, and has tended to obscure the real importance of his contributions to the study of education as such. There is sound educational theory in the heuristic method that he applies so successfully, but so soon as it gets mixed up with following nature it gets lost in inconsistencies. There may be a general truth in the statement that the natural way to acquire knowledge is to go through the same process as that by which it was originally gained; but if this means that the individual is to go through *all* the steps of the original discoverer it is obvious that the mere conditions of time would reduce the scheme to absurdity. We may learn much as to order and method of presentation from the experience of the race, but when we propose to return to nature in the sense of making each child his own knowledge discoverer, we feel that the case is hopeless. As well set a little boy to play with a boiling kettle and a tea-spoon till he discovers the principle of the steam engine.

The revolt in education from convention to nature was not of course confined to Rousseau though his protest was the most striking. Further, it represented the more philosophic type of protest. That is, his system had a definite though perhaps mistaken philosophical basis. To this same class of protestants against convention belong other two educators, Pestalozzi and Froebel. Each of these in a different way harked back to Nature, Pestalozzi by way of sentiment and a direct love of external nature, and

Froebel more through his vague idealism. In Froebel we find the usual vacillation between the meaning of *nature* as the nature of things, and the nature of the educand. There can be no doubt that had he been questioned on the subject he would have replied that the distinction is immaterial, inasmuch as the findings of the two natures must coincide. The nature of the educand is after all only a part of the wider nature, and he could not conceive that the two parts of nature should give contradictory advice. We have seen, however, that it is possible for unintelligent human beings to set one part of nature against another, and it is this very possibility that renders it necessary to have educational theory at all. Its function is not to justify the ways of God to man, but to enable man to have an intelligent acquaintance with God's ways. What is fundamental is that the man should be allowed and encouraged to develop according to the laws that are inherent in his nature.

It is from this point of view that Goethe's contribution to educational theory may be best considered. He is quite the type of the educational naturalist described in the passage quoted from Mr. Oscar Browning. Goethe's disinclination for theory is well known, so that we need not be surprised to find his educational views expressed rather in pictures than in systematic statements. There are those who regard the *Wilhelm Meister* papers as a new form of educational treatise in which educational processes are exemplified, without the aid of any didactic comment. But they describe rather a pilgrimage than an education. At the end we cannot say that Wilhelm is educated: all that we can say is that he has lived—not wisely, and not well, but that he has lived. Education demands just the deliberate end or aim that is studiously excluded from the *Meister* papers. A striking characteristic of Goethe's writing in general is the absence of evaluating comment on the moral situations dealt with. In the *Lehrjahre* no doubt educational theorists will find many illustrations for the treatment of their subject, but except the few sections

on the Educational Province in the *Wanderjahre* there is nothing specifically educational in the *Wilhelm Meister* papers. Truth to tell Goethe had as little of the pedagogic spirit as falls to the lot of man.[1] For his own personal education he had a genuine enthusiasm, and there is no doubt that he used many of the ordinary relationships of life with a deliberate educational bias, the analysis of which might repay the educational psychologist. But for systematic educational theory he had little inclination.

The chapters on the Educational Province were compared, by a contemporary writer,[2] somewhat to Goethe's satisfaction, with the *Republic*. But apart from any difference in the genius of the two authors, their works are poles apart. The fundamental contrast is indicated by Goethe's title. Plato had a pedagogical *state*, in which everything was ultimately subordinated to education. In the *Wanderjahre* we have a pedagogical *province*, whose business it is to prepare citizens for the great state which is the world. The province is merely a great world-school. No doubt it is planned on a magnificent scale, with towns and villages instead of class-rooms, territories for playgrounds, populations for staff, and trades and industries with their equipments for apparatus. But the whole is a school after all, and is subordinate to the world for which it prepares. Its lack of organic relation to the world is indicated by the fact that pupils who do not conform to its rules are sent back to the world as unsuitable material, and by the other fact that any educand who shows mimetic talent is sent to some of the great theatres of the outside world, "so that he may with all speed be guided on the

[1] It was of course inevitable that he should fall into the hands of the "als Erzieher" writers. At Leipzig in 1864 appeared Merz' *Goethe als Erzieher, Lichtstrahlen aus seinen Werken*. Later appeared Langguth's *Goethe als Pädagog*, followed in 1886 by the same author's *Goethes Pädagogik*. But, as Langguth himself points out, Goethe's editors have to supply the systematic theory for themselves: see his *Goethes Pädagogik*, p. 22.

[2] Professor Kayssler: *Fragmente aus Platos und Goethes Pädagogik*.

stage to the future waddling and quacking of his life."[1]

Goethe is an educational naturalist even in the secondary sense of the term which implies the making an important use of physical nature as an educational organon. He recognises the general effects of the education of nature: "mountains are dumb teachers, and make silent pupils."[2] But he does not forget the more specific effects of the study of particular branches of natural science, as is shown in the importance he attaches to the speculations of geology as the subject-matter of the pupils' study.[3]

His primary naturalism on the educational plane comes out most prominently in the importance he attaches to out of door training, and to social intercourse. As one would expect from what one knows of his character, he gives due prominence to the humanistic side, and indeed makes a point of maintaining the complete compatibility of physical and practical training on the one hand with intellectual and cultural training on the other. "Activity and practical ability are far more reconcilable with efficient instruction than one thinks."[4]

It is a little paradoxical to class Goethe as a naturalist and yet to have to state that he does not believe that Nature has given the one essential. "One thing no man brings into the world, and yet it is that upon which depends everything through which a man becomes a man on every side."[5] This is Veneration, and we are told that it is the educator's duty to develop it. But there is here no real difficulty. The contrast between Nature and Art is not fundamental. There is nothing ultimate in the view that "Art is called Art precisely because it is not Nature."[6] Obviously Goethe is playing with a distinction within the wider whole of Nature. This is implied in the method he adopts of inculcating veneration. The symbolical attitudes of his educands indicating reverence for God, for

[1] *Wanderjahre*, bk. ii. chap. ix.
[2] *Ibid.* chap. x.
[3] *Ibid.* chap. x.
[4] *Ibid.* chap. ix.
[5] *Ibid.* chap. i.
[6] *Ibid.* chap. ix.

physical nature and for themselves, really imply the capacity for veneration which he does not deny to the educands, though he will not admit that it is given them fully developed. All that he maintains is that veneration is not an instinct. His use of this form of acted symbolism recalls the *Mutter und Kose-Lieder* of Froebel, who, however, was led away into exaggerations that Goethe's sense of proportion rendered impossible. In the same way the graphic symbolic teaching by means of symphronistic actions, escapes the extravagance of the diagrams on the walls of the ideal schools of Comenius.

Goethe anticipates certain lines of development of psychological estimate of character when he tells us that in connection with the choice by the educands of their own garments "by the colour you may find out people's bent of mind, and by the cut, the style of life."[1] This may be somewhat shaky speculation, but he is on firm ground in his conclusions, in the same connection, regarding the power of imitation, and the possibility of encouraging originality. Throughout his writings Goethe always treats Nature with respect. Whatever Nature wills is by that very fact regarded as right.

This justificatory appeal to Nature is characteristic of the naturalistic school whether on the idealistic or the materialistic side. Since Nature is thus raised to the position of an ultimate court, there is inevitably some juggling with the different meanings of the term in order to justify certain lines of action that are at least doubtful. But accepting the term in its widest signification, the essential point is to determine what Nature wills. Once that is made clear, the question of obedience may be taken as settled. Froebel is keen upon this point, and we have seen that even Herbert Spencer is willing to abide by Nature's decisions, as he understands them. So long as the reference is to Nature in this wide sense, there is little danger on either the intellectual or the moral side of education. Further, the tendency to doubtful morality on a

[1] *Wanderjahre*, bk. ii. chap. ii.

naturalistic basis is almost entirely confined to the stage beyond that of school education.

On the intellectual side, however, there is a certain danger of confusion between naturalistic education, and the mere teaching of naturalistic subjects. It appears probable that in the so-called naturalistic schools that sprang up in Europe during the Enlightenment there was a tendency to this confusion. The subject-matter of instruction was largely taken from Nature. It is true that a definite proclamation of naturalistic teaching after the plan of Rousseau was loudly made. Children were to be taught as children and not as grown up men and women. But in actual experience the schools were schools of protest. They represented negative education only in the sense in which we have used the term. Emile would certainly not have recognised his system had he happened to spend a day in one of them.

At the present time educational naturalism is represented by various movements. Even in elementary education the revolt from bookishness has had its influence in naturalising the curriculum. The great development of Nature-Study, and the out of doors methods of studying geography are symptomatic, while the inception and development of the open air school point in the same direction. The school journey is becoming a recognised part of the curriculum of the more progressive elementary schools, and even the "long school journey," which involves an expedition of a week or longer, has received official sanction. In England there are several boarding schools founded and carried on by private enterprise on distinctly naturalistic lines. In their systems is to be seen the usual oscillation between the two main ideas of Nature. The schools are in the country and the pupils are made to take a share in many of the country occupations. They learn something of farming and gardening, and a good deal about country life generally. But in addition the home life of the school is based as far as possible on the family ideal. Very frequently the schools are co-educational, and a deliberate

attempt is made to carry on the work of the school in such a way as to be in accordance with the nature of humanity. After all, this oscillation between the two notions of nature is only a reflection of the oscillation found in actual life. There is a real connection between simple country life and the normal development of the young human being, especially on the physical side, and those newer schools appreciate this and act upon it.

In point of fact our Anglo-Saxon individualism forms a very favourable nidus for naturalism, and our educational system wherever left free to develop in its own way has followed naturalistic lines. The public school is the most characteristic feature in English education, and as compared with the continental equivalent is markedly naturalistic. To be sure even Monsieur Compayré would not ask us to make obeisance to Rousseau for any good that is to be found in the English public school. It has developed on its own lines, and the open air and relatively unbookish life are more natural than the continental *internats*, merely because of our national preferences. M. Edmond Demolins, who paid us the compliment of publishing his *A quoi tient la Supériorité de l'Anglo-Saxon*, gives an account in his *L'Éducation nouvelle* of the school he founded near Verneuil in Normandy. Here he has[1] followed rather the independent naturalistic English schools, than the public school model. He has gone to great lengths, but he has drawn the line at co-education, "qui en France, n'a cessé, depuis le Moyen âge, de nous sembler horriblement dangereuse et immorale."[2] In this case we may have to follow Monsieur Compayré and lift our caps to Rousseau. But when the historian of education asserts:

"Enter one of those American schools in which the abuse of books and manuals is condemned, and in which the mental slavery of mechanical instruction has been exchanged for methods of intellectual freedom, so that the child shall acquire what it is

[1] M. Demolins died a year or two ago, but the school still flourishes.

[2] Ch. Letourneau: *L'Évolution de l'Éducation*, p. 572.

requisite to know as far as possible by himself and by his personal effort. In this again you will be forced to acknowledge the hand of Rousseau."[1]

we decline to be forced, and prefer to fall back upon Demolins for an explanation.

[1] Pioneers in Education, *Jean Jacques Rousseau*, p. 110.

CHAPTER X

THE IDEALISTIC BASIS OF EDUCATION

At the unreflective stage of human activity there is the tacit assumption that the educator and the educand are two independent entities acting and reacting upon each other in an environment that is more or less a free field for the exercise of the influence of both. Master and pupil alike are assumed to be in that primitive state in which thinking is carried on at what is sometimes called the "thing" stage, and no account is taken of a more general view that must include both in a wider system of which they form part, and to whose laws they must conform.

As soon as the stage of reflection is reached, there arise doubt and conflict. The independence of the individual must be conserved, and yet the immutable laws of the system in which the individual finds a place cannot be disregarded. According to the school of thought favoured by the educator does he emphasise the individualistic or the cosmic element. It is obvious that what is wanted in education is a system of philosophy which shall explain the facts as the educator finds them. It must be wide enough to include all the problems that arise in the varying relations between educator and educand, and between both and the environment in which they find themselves. An educational theory based on such a philosophy is naturally to be sought at a late stage in the development of educational thinking: and it is there indeed that we find it fully worked out. But it is also present at the earlier stages of the history of educational theory. The idealism of

to-day is implicit in the philosophy of the old Greeks. The educational theories of Froebel find a great deal of justification in Plato. Idealism in one form or other permeates the whole of the history of philosophy.

If we examine a number of definitions of education as given in the standard text-books we shall find that the great majority of them include the word *development.* But only organism can develop. The educand must therefore be an organism. Now an organism must be at least a unity amid differences, a unity of activity that gives a meaning to the whole in relation to all the parts. It is a whole in which differentiated parts may be distinguished ; but no part of it has any significance apart from the whole. The description might apply so far to a complicated machine, with this difference that the unity is not really of the machine itself but of the mind that conceived it. The unifying principle runs through the whole of organism, and is, like the Aristotelian soul, all in the whole and all in every part. When in his curious parable of "The ship that found herself" Kipling describes how every plate and nut and bolt and screw of the new steamship strained and struggled and creaked till at last they all fitted into each other so perfectly that each could perform its own function as a part of the whole while losing itself in that whole, he is really describing the passage of a machine into an organism. He is supplying it with a living soul.

The necessary and sufficient mark of an organism is this oneness in difference, and the resulting wholeness and interdependence of its activities. An organism is self-determined. Its progress is a development, a self-directed striving after a form towards which it has an inherent impulse. An organism may be killed outright, or it may be deflected from the natural attainment of the form after which it strives, but it cannot be made to develop into anything else. An acorn may be compelled to become a misshapen and stunted oak, but it must either die or become some sort of oak. A child may have its head

constrained to take the form of a square pyramid. But the force that makes the stunted oak or the geometrical skull is the same force that if left alone would have produced the healthy oak and the normal skull.

What is true of the little organism of the tree or the child is held by some to be true of the whole universe. The resulting idealistic philosophy is so wide and so difficult to grasp in its fulness that we need not be surprised to find that it frequently falls back upon metaphors in its exposition. This is particularly the case in its educational and psychological applications, for of all branches of study we find that these two are perhaps the most metaphor-ridden. Nor is this wonderful when we remember that their subject-matter differs so materially from that of most of the other sciences and arts. States of consciousness are so impalpable, so elusive, so baffling that it is only natural that any means should be welcomed that will bring them to anchor. The tendency to hypostasis that is so marked in all philosophical speculation is the inevitable result of the fluid state of the material with which philosophy works.

As long as a metaphor is recognised as a metaphor, no harm results, and much advantage is gained in the way of exposition: for many minds can easily understand a relationship when dressed in a concrete form that find it quite impossible to grasp it when abstractly stated. The important thing to see is that the relationship embodied in the metaphor corresponds to the relationship to be illustrated: in other words we must see that our analogies are legitimate.

In the case of the Plant Metaphor which has had such a wide influence in modifying views of education, we are not dealing with a remote analogy. Indeed it may almost be said that we are not here dealing with an analogy at all, but with a type. The plant does not merely stand for an organism. It is an organism. If it be asked why, in that case, it is necessary in order to illustrate the development of the child, the answer is that the child as possessing self-

consciousness is an organism of a higher grade than the plant, is in fact a hyper-organism. One of the matters badly slurred over in philosophical writing is the difference between *organism* and *subject* or spirit. *Organism* is a better metaphor by far than *machine* ; but it is a metaphor, and an inadequate one in every way. Among the reasons for substituting the plant for the child is the not unnatural unwillingness to treat a human being as a mere subject for spiritual dissection. At the earlier stages of educational theory there was doubtless also the additional reason that the appeal to another kind of organism somehow strengthened the argument. For many minds, to say "as the twig is bent so is the tree inclined" not only illustrates the aphorism "train up a child in the way he should go, and when he is old he will not depart from it," but actually proves it.

So appropriate is the plant figure that it has not only won a place in proverbial philosophy but has been worked up into an elaborate system by Pestalozzi and Froebel. The idea is mainly associated with Froebel, because he not only worked up the analogy on its philosophical side, but elaborated a system of training young children that has given the metaphor a certain stability. Every time we talk of a Kindergarten we acknowledge the influence of the Plant Figure.

The comparison is not, however, rare in the history of educational theory before the time of the German educator. It is, as one might expect, brought prominently forward in the *Great Didactic* of Comenius, where we find the following passage:

"Philosophers have called man a Microcosm or Epitome of the Universe, since he inwardly comprehends all the elements that are spread far and wide through the Macrocosm, or world at large.... The mind, therefore, of a man who enters this world is very justly compared to a seed, or to a kernel in which the plant or tree really does exist, although its image cannot be seen. This is evident ; since the seed, if placed in the ground, puts forth roots beneath it and shoots above it, and these later on, by their

innate force, spread into branches and leaves, are covered with foliage, and adorned with flowers and fruit. It is not necessary, therefore, that anything be brought to a man from without, but only that that which he possesses rolled up within himself be unfolded and disclosed, and that stress be laid on each separate element."[1]

After this there is nothing new in the Pestalozzian statement of the case. We find it most characteristically expressed in his birthday address on 12th January, 1818:

"I see that higher education of the soul as a tree planted by the waterside. Behold it, with its roots, trunk, branches, and fruit! Whence are they? See, you put a small kernel in the ground, and in that kernel is the spirit of the tree, its essence and its life.... The seed is the spirit of the tree, and makes a body for itself.... Its inner organic life has now passed into the root, and from the root everything, pith, wood, bark and fruit will come.... As the tree grows, so, too, does man. Even before the child is born there are within him the invisible germs of those tendencies that life will develop. The various powers of his being and his life are developed, as in the tree, by remaining united, yet distinct, during the whole course of his existence."[2]

One would like to believe that the later educator differs from the earlier in that he brings to clear consciousness what his predecessor only guessed at in a vague way; in other words that Pestalozzi philosophised where Comenius only dreamed. But our knowledge of the life and work of the Swiss educator prevents us from thinking that he had attained to anything like a clear conception of his own philosophical position. From the standpoint of the professional philosopher Pestalozzi was little more than an outsider, and an illiterate. Münsterberg tells us bluntly that Pestalozzi and Froebel were no psychologists. Though the author of *Leonard and Gertrude* was thus incapable of realising his own ideal of "psychologising education," his genius penetrated deeper than the sharpened wits of the trained thinkers, and he certainly saw

[1] *Op. cit.* chap. v. (Keatinge's translation, p. 194).

[2] De Guimps: *Pestalozzi, his Life and Work* (Russell's translation, p. 329).

more in the plant metaphor than did any of his predecessors. In point of fact he based his interpretation of the metaphor on more or less clearly conceived idealistic principles.

It is true that Rousseau usually gets the credit of having won Pestalozzi for education. But Pestalozzi lived a long life, and the force that first impelled him to education left scope for many others that sought to modify his thought. Kant was just finishing his university studies when Pestalozzi was born, and by the time the educator had found his vocation and was actively engaged in it, the Kantian thought was beginning to make itself felt throughout Europe. The germs of idealism were in the air, and they had need to be if they were to reach a man who read so little as Pestalozzi. But his mind presented a nidus specially prepared for the infection. He was indeed a born idealist, and could not help reading into his plant metaphor most of what is implied in the idealist position. It is true that he did not bring all this to clear consciousness. He felt rather than thought.

As Hegel developed most of what was implied in the Kantian position, so Froebel developed what is implicit in the Pestalozzian. It is true that when we speak of Froebel's bringing to clear consciousness what is implied in Pestalozzi we are speaking technically, for whatever he may be, Froebel is not, in his writings, what is commonly understood by clear. There are few more obscure or confused writers. But he had a firm grasp of the essentials of the Idealist position, and sought to harmonise with it all his educational theories.

There exists at this moment a large and important school of educators who ground their opinions on a more or less intelligent interpretation of the life and works of Pestalozzi and of Froebel. They have outlived the philosophical difficulties that troubled at least their later master. They have arrived at a system that experience has proved to be valuable, and they are inclined to rest content, without going into uncomfortable details of origins and relations. It was otherwise with Froebel. He keenly felt the initial

difficulty of his system and throughout his *Über die Menschenerziehung* he struggles with more or less success to justify the educator in interfering with the work of education at all. The ordinary kindergartners dabble in the mechanism of idealism without in the least troubling themselves about the nature and necessity of the primary assumption that gives idealism life and meaning. Naturally as soon as they set themselves to think at all, they come to a deadlock. The child is like a plant. It can grow and develop, it is true, but only in a determinate way. True education must therefore aim at permitting and encouraging the child to develop in the greatest possible freedom. Froebel sees this very clearly:

"Therefore education, instruction and teaching should be originally and in their first principles necessarily passive (only guarding and protecting), not dictating, determining, encroaching."[1]

Further, in the following section we are told that:

"The still young and so to speak, just becoming human being, even though still unconsciously as a product of nature yet definitely and surely wills what is best for himself, and more than this in a form wholly fitted for him, which he feels within himself all the disposition, force, and means to represent. So the duckling hastens to the pond and on and in the water, while the young chicken scrapes in the earth, and the young swallow catches his food on the wing, and almost never touches the earth."[2]

Here the important reference is clearly to the child, the other creatures being introduced merely as illustrations, since they exemplify more strikingly than the child can do, the first activities of their lives. If, then, the child makes for what is for his own good as certainly as a duckling makes for the water, it is obvious that the occupation of the educator is in a parlous state. Why employ a man to make the child do what the child cannot help doing? One wonders whether Comenius in his use of the Plant Metaphor has not caught a glimpse of this difficulty. The words are suggestive: "It is not necessary, therefore, that

[1] *Menschenerziehung*, part i. § 7. [2] *Ibid.* § 8.

anything be brought to a man from without." Indeed the phrase "rolled up within himself" rather suggests the unfolding theory that at once blocks all further progress to the educator. It is no argument to say that if Comenius practically, though perhaps unwittingly, adopted what amounts to the "encasement theory," then he ought to have given up all educational writing. That is not the way of writers on education, as is witnessed by the Froebelians. The Kindergartners are not greatly troubled by this challenge to their utility. Their reply is botanical. The Plant Metaphor produces its natural result. A given seed can bring forth nothing but a particular plant, and yet there may be room for a gardener. As a gardener seeks out the best site for his plants, and sees that they get a sufficient supply of air and water, so the educator can see to it that the educand is placed in a desirable environment, and has his mind properly nurtured with suitable subjects of study. This at least is possible work for the educator; but is it all that he can do? We might fancy Comenius defending his theory by showing that it was necessary for some one to remove the different wrappings in order that the human soul might unfold itself, though the unfolding force came entirely from within. Is this all that the educator can do? Is he to accept the humiliating function imposed upon him by Pascal: "d'écarter des obstacles?"

The very elaborate scheme of gifts and occupations that make up the kindergarten system shows that Froebel regarded education as at least possible, and by implication, desirable. We are accordingly entitled to a better argument than a mere analogy. The problem is how to find a place for the educator between a developing nature with a determination towards good, and a world that is by hypothesis good, inasmuch as "Everything has come forth from the divine, from God, and through the divine, through God alone, is it conditioned."[1]

Froebel's answer rises above Botany. He appeals to the larger scope of Idealism; takes a wide sweep; and

[1] *Menschenerziehung*, part i. § 1.

seeks to envisage the whole universe. The educator, he tells us, is himself a part of the universe, and therefore must have a definite place in it. That this place as educator is consistent with the rest of the theory of the universe is manifest, because the educator who is found imposing laws and restrictions on the child "is himself rigorously and inevitably placed under an eternally ruling law, an unavoidable necessity; thus all arbitrariness is avoided."[1]

The educator must guide and be guided. His consistency as governed and governor is guaranteed by the continual reference of himself and the educand to an invisible and invariable third. The educator while seeking to enable the educand to attain to self-realisation must seek at the same time to realise himself. Only by rightly guiding the educand can the educator himself be right. If the boy's nature and the master's are each developing freely, then their actions must of necessity fit into each other, and produce a harmony which *is* the invisible and invariable third, in other words the inherent rationality of the universe.

Underlying all this is the great assumption on which Idealism is based. It is assumed that the universe is rational, that is that things act upon each other in a consistent way, that there are certain invariable laws, and that these all work so as to secure the systematic order of the universe. All this is practically assumed not only by the idealist but by everybody who thinks. Ultimately it has to be recognised as more than an assumption; it may not unfairly be claimed as a postulate, even as an axiom: it is involved in the very act of thinking of any object. The reference to the mind of the thinker himself destroys pluralism, as it destroys every other form of scepticism. The negative of the sceptic, as always, implies a positive, and the affirmation of irrationality is really a negative. We must discriminate between the hypothesis of the rationality of the object of thought as such—*i.e.* whatever

[1] *Ibid.* part i. § 12.

is the object of thought apart altogether from any considerations of its nature—and the hypothesis of the rationality of special facts thought about. We cannot trust our own intelligence without assuming the rationality of its object.

If the universe as the object of thought is rational, then everything that exists is right and reasonable from the point of view of one who can envisage the universe as a whole, though from our immediate standpoint here and now we may not appreciate the meaning or the justice of the present state of affairs. On the other hand, whatever ought to exist in a reasonable universe must exist sometime or other in the actual universe; if not in the present, then in the future. We can acknowledge that "Whatever is, is right," if we include among the things that are, our indignation at wrong, our dissatisfaction with imperfections, and our keen desire for and strenuous effort to secure redress and improvement. Understood in this way, then, the idealist position may be summarised in the brief formula: The real is the rational, and the rational is the real.

All this implies a dynamic ideal: progress is of its very essence. The "rightness" in "Whatever is, is right" must not be regarded as fixed. A universe that can get better may be *more* right than one that is a static best. If it be worth while at all to evaluate the whole, it is worth contrasting the progressive best with the fixed best, even though this introduces the unsettling notion of degrees of rightness. By insisting upon the rightness of opposition to existing wrong, we bring in elements that are usually neglected, we suggest in fact the real existence of potencies not-yet-realised, we postulate a developing universe.

It is obvious that we have no means of knowing by empirical observation that the universe is rational. We see only a scrap of the universe so far as space is concerned; we live through only a moment of its existence in respect of time. If we could observe the universe from the point of view of eternity it would be different. But as matters

stand we are compelled to assume that the universe is rational. If it is not, then thinking is of no avail: living is vain: nothing matters. The wonderland through which Alice walked fitly symbolises a universe that is not rational, and compulsion to assume is the strongest of all proof. The fact that we cannot observe our universe to be rational, need give us no more concern than the fact that we cannot stand on our own shoulders. We cannot transcend thought. We cannot directly see that the universe is an organic unity; for we ourselves are a part of that unity, and cannot rupture it so as to rise above it to envisage it and take an impartial view of it. But supposing, as appears to be the case, that *no* explanation is possible except on the view that the universe is rational, what then? Would not the existence of *any* and therefore of *all* experience amount to a proof? But we do live; things do matter; the sceptic thinks, and thinks he is telling the truth—hence what is involved in living and thinking can hardly be denied. The proof is being supplied all the time; even though it cannot be corroborated by actual experience of the whole universe. If we multiply

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have we any empirical proof that our result is right? But does it contain more truth than $2 \times 2 = 4$? So with regard to the knowledge of a single fact and the knowledge of the universe. We know something of the whole—that is, we give proof in that instance of its rationality—when we know that we see a red or a yellow flower, or know *anything* belonging to the universe.

Thus while frankly acknowledging the impossibility of empirical observation, which, by the bye, never *is* proof, we can confidently appeal to practical experience, and to the history of the race, to supply confirmatory evidence. In dealing with the philosophy of history we saw that the idea of progress, vague at first but gradually becoming clearer, has succeeded in turning men's eyes from the past to the future in the search for that golden age that humanity cannot help placing somewhere other

than in the present. The material empire of Rome, the spiritual empire of Christianity, the humane empire of the Renaissance and the intellectual empire of modern science, are all stages on the way by which the idea of progress has become more and more real and dynamic. To assert that the universe is irrational arouses as much opposition from the man of science as from the idealist philosopher. "La Mettrie was right in thinking that materialism may be united with practical idealism."[1] Whether this opinion can be applied generally or not, it is certainly applicable to the view of the universe taken by both schools, so far as rationality is concerned. There is no need to minimise the difference between the Spencerian and the idealistic position, but the whole of Spencer's work could be legitimately adduced to support the view that the universe is rational, and indeed, in the sense indicated above, that the real is the rational and the rational is the real. One cannot rise from the reading of a book like Sir E. Ray Lankester's *The Kingdom of Man* without realising the impossibility of falling back upon a cosmic philosophy of chance happenings.

On the other hand it involves no contradiction to maintain that the universe will never be completely explained although it is always being explained, so that many people may be prepared to grant the rationality of the universe, with the reservation that this admission does little towards explaining the problem of education, or indeed, any other problem. To this an ungrudging assent may be given. Those wide generalisations about the rationality of the universe and the organic unity of all things, give little help in what is called the practical work of education. But they do give us a point of view, and enable us to place our facts in such a way as to get their full value. We must fill up the schematic form of idealism with a content that derives a meaning from the scheme, and at the same time enriches it. There is danger of the reintroduction of a dualism in thus, even in thought, opposing the schema

[1] Harald Höffding: *History of Modern Philosophy*, vol. i. p. 475.

of idealism with its content. The two do not exist apart from one another, though from the necessities of our finite thought we must from time to time view them as if they did. Within the rounded whole that makes up the universe of the idealist, we must begin our work as educators somewhere; and it would appear as if the sacred veil of unity must be rent at some point or other in order that we may make our imperfect beginning.

Just here it is well to realise that though the educator stands outside and independent of the educand, the two belong to the same system. To the individual consciousness there may seem to be a breach of continuity when the educator thrusts himself into the experience of the educand. But a sympathetic educator who has made the necessary preliminary study of the nature of the educand and his environment, will find that the stream of his own experience mingles with the stream of the educand's experience with no disturbance of the flow of either. In the series of systems of ever-increasing width and complexity the educator must discover or invent one that includes the conditions of the smaller systems within which he has to do his work. His practical method does not need to give a complete justification of its existence: the essential point is that none of its principles shall contradict any of the findings of the general system. The idealist position provides us with a general point of view that enables us to gather together and explain in a reasonable way a great many isolated and apparently contradictory facts; or if it does not always explain, it at least gives us the assurance that there is an explanation, and suggests lines along which we may profitably work in seeking it. Adopting the idealist position we are able to introduce a certain uniformity into our method of dealing with the various educational theories. We have certain common categories that may be applied, and by which our criticisms may be tested.

The universe is not at a standstill. Its progress corresponds to what we understand by development. Now

development always implies the working out of the antagonism of opposing forces, forces whose very nature it is to oppose each other, and yet out of this opposition inevitably arises reconciliation. The result of the opposition of two forces is the creation of a new force which in its turn finds itself opposed by another force, and the process begins anew. In an organism, for example, we have the anabolic force and the catabolic opposing each other in a long process that results in the complete development of the individual organism. Here we have a case in which the various steps in the development may be traced by the observer; he is able to see the end from the beginning and to correlate the different steps. It is different when we deal with elaborate processes involving many interests and long periods of time.

Obviously the interaction between the educator and the educand forms one of the ordinary cases of the opposition of two forces that are seeking a reconciliation. It is true that in education, as in many other directions, the idealist position has been accepted timidly and incompletely. Froebel, to be sure, gives no uncertain sound. He adopts the idealist position outright and without reservation. Later Froebelians instead of accepting boldly and fully the doctrine set forth in the *Menschenerziehung* have selected for special emphasis the principle: *Find what Nature intends for the children, and follow that.* The result is that "a passivity, a following" has become the watchword of the later Froebelians; and so true are they, in theory at least, to this view point, that we can hardly wonder when a sort of general paralysis sets in. So passive must the Froebelians become, if they are to be true to their theory, that they must cease to have any influence upon the educands at all.

When we consider the bewildering paraphernalia of gifts and occupations in the Kindergarten we are compelled to think that the Froebelians have hardly been loyal to their principle of non-interference. When challenged regarding the exceedingly active outcome of their theory

of passivity, the Froebelians usually offer the justification that the various exercises have been found by experience to be exactly the sort of thing that Nature demands, and that the teacher in applying the recognised Kindergarten schemes is after all only "passive, following."

It would be unfair to the system, and not to our present purpose, to argue from the fact that it would be difficult to find anything more artificial than many of the practical applications of the Kindergarten principle. It can hardly be held responsible for the rigid, and therefore irrational, applications made by unsympathetic teachers. Yet it is surely not unreasonable to maintain that "a benevolent superintendence" is too modest a name for the complicated system the Froebelians have elaborated. The practical value of the Kindergarten system is not the point that at present interests us; the question is: Can the "passive, following" theory be held to be consistent with the idealistic view as developed along Froebelian lines?

By mere observation it has been found that children are fond of making things, of expressing their own ideas, of "making the inner, outer." When the teacher gives them the opportunity of exercising this natural power or tendency, he feels that after all he is only encouraging them in doing what they would like to be doing any way. He feels that he is therefore "passive, following." He is but the jackal that provides the prey; the catching and eating form the part of the children. If the teacher is content with this humble function there is nothing more to be said. Education is recognised as a mystery. Given a child and certain materials, it is found that a constant result follows. This may be interesting as a fact in natural history. It cannot be held to explain anything.

We have already seen that there is a sense in which all education is self-education. No man can learn for another: no man can be moral for another. Jacotot's definition of teaching—*causing another to know*—has been discredited. Can the definition of education—*causing another to develop according to the laws of his own nature*—be

defended? By the conditions of the case the subject must develop somehow, and the question naturally arises whether he can develop in any other way than according to the laws of his nature. The answer is perfectly plain: there is no other way in which he can develop. There are no other laws. The laws may be misapplied, and the educand may become an abortion spiritually as was the case physically with the geometrical heads of children already mentioned. But these evil effects can be attained only by an application —misapplication, if that is preferred—of the laws of the educand's being.

Perhaps it may be worth while to point out that these laws are not something different from the *naturel* of the educand: they form that *naturel*. We found that self-realisation was one of the ideals of education, the one that is specially associated with idealism. Now the self is nothing more than an organised set of forces that seek to realise themselves.

We have a case here of what may be called potential predestination. Apart from external interference the self must develop in a particular way, and if external interference does occur there may be a disappointing result brought about by the struggle of the inhibited forces to produce their natural effect. There is here clearly an element of what the French call *innéisme*. The self has certain innate elements, and if these are interfered with distortion is the result. But idealism is by no means committed to the encasement theory. There is no necessity to regard the development of the individual as a mere unfolding, that is predetermined in all its details. His reactions are no doubt determined by his nature, but that nature is not something independent and isolated. It has necessary connections with the environment for and into which it has been created. When Tarde tells us[1] that "L'évolution de l'individu est une élicitation" he recognises by the very terms he uses that there is room for some sort of outside force. There is more for the educator to do

[1] *Les Lois de l'Imitation*, p. 230.

than to stand aside and keep a clear field for the developing ego. On the unfolding theory there is nothing left for him but to ward off dangers. According to this view education is a purely subjective process concerning only the educand. It does not rise even to that form known as negative education, for we have found that even this form makes certain demands on the external educator. Here we have no room for him. He is only in the way. This was probably what was in Mr. Bernard Shaw's mind when he wrote: "The vilest abortionist is he who attempts to mould a child's character." No doubt he would recognise the value of the work of negative education. He would probably allow the educator to keep clear the field for the educand, and save him from all manner of disturbance that might interfere with his free and full self-realisation.

There are other educators, however, who cannot regard the matter as so simple as all that. They believe that there is room for a certain amount of positive work. The *innéisme* of the self has to be recognised, but it is of a purely generic character. It may be directed in this way or in that. To get at the universal elements of child nature is one of the essentials of the preparation of an educator for his work. But he must not stop there. Mendel can teach us a great deal, and we are very grateful for his instruction. But after all a man is not a pea, and the points in which he differs from a pea are closely related to his future life work. Most of the things we can assert about the pea as an organism may be affirmed of the human organism: but this is only the beginning of a description of complex human nature. Pea-life can be regarded as nothing more than a diagram in which we can read more easily certain human problems because so many of the complications have been left out. We gain in simplicity what we lose in comprehensiveness. It is not very difficult to determine what is the best sort of pea that under the most favourable conditions can be produced from a given seed, and those favourable conditions are readily discover-

able. With man it is very different. It is true that there are enormous differences among individual peas, but there cannot be so many differences as are possible in the case of the infinitely more complex human being. Even with the simple pea it is very difficult to produce definite modifications, and the experimenter has need of all the knowledge he can acquire of his subject. But, after all, we may get some considerable help from the pea itself. In our investigations we can put the pea in the witness box and take liberties with it that are impossible with the human subject. In the problem of the self-realisation of the pea we allow the pea to determine, as the result of our experimenting with different seeds, which is the best self to realise. But with human beings we may not experiment on this fundamental point. The best we can do is to utilise the results of previous experience. By this time we have reached a fairly general agreement about the qualities that we consider it essential to find in a fully developed ego. But the difficult problem for the educator is to determine, in the case of the particular educand here and now presented to him, what is the highest attainment possible under the most favourable conditions, what is the best that this individual human self can realise. The educator's problem is really twofold. First, he has to discover what is the highest stage of development possible in each case. Secondly, he has to discover some means of enabling the educand to reach this stage.

The first problem in its application to individual cases has been very generally neglected. The problem has been rather: Into which of the possible lines of education at present available can this individual educand be best fitted? No doubt the fundamental problem has been considered in its practical aspects by parents and others interested in making the best of a particular educand. But in almost all those cases the issue is confused by the presence in the investigator's mind of a predetermined goal which he wishes to attain. He is not so much interested in finding out what is the absolutely best result within the reach of

the educand, as in discovering the most effective way of making him the best governor, orator, scientist, soldier that is possible in view of his *naturel*. On the other hand, when the pure philosopher has considered the matter at all, it has been in connection not with an individual educand, but with man in general. Unfortunately the problem of the highest degree of attainment available to humanity, and of the limits to the perfectibility of the human species, is of practical interest only to the Cosmic Educator. The professional educator, and the parent, are concerned to discover the highest possibility of the *naturel* of the educand here and now present.

We are sometimes invited to confess that the problem as thus stated is insoluble, and must for ever remain so; and the practical educator is strongly tempted to accept the invitation. But recent investigations into capacity hold out such alluring hopes that we are tempted to think that it may be sufficient to admit that we can never expect to get a complete knowledge of the possibilities, though we may have some confidence in looking forward to a time at which practical psychology will be able to give such information as will prevent at least any serious miscarriage in the allocation of lines of development. No doubt were all the conditions of each case known, it would be quite possible to deduce the highest self that any individual is capable of realising. But such a knowledge is for ever beyond our finite minds. There would be no problem at all if we could view the educand *sub specie aeternitatis*: it would become a mere statement of facts.

Practical educators have not hitherto troubled themselves very greatly about the absolutely best development of each educand. They have transferred their attention from the first problem to the second. Setting up a more or less arbitrary ideal they have given their main attention to the discovery of the best means of attaining this ideal. Their instinct has guided them aright; for the second problem, that depends upon the first for its very conditions, may itself supply at least a working solution of the first.

In the course of its own development the ego may indicate its own ideal, indeed, must indicate that ideal. The important question now arises: Does it indicate that ideal soon enough to enable the educator to profit by the indication? Cases of late development are numerous and disquieting, and writers on education make merry over the mistakes of educators in determining the future possibilities of educands.

"There is nothing more deceptive, indeed, than the indications of a vocation. We have not, as one may say, a psychometer to effect the selection of intelligences, to discern the form or the nature of each, to separate out the gifts or faculties that belong to each, and to deduce from these the studies that it ought to follow."[1]

The psychometer of this sarcasm may not be so far to seek as M. Dugas believes. Naturally we cannot expect a mechanical invention to enable us to apply acquired knowledge directly to an appraisement of the mental qualities of the educand—though Professor C. Spearman's "foot-rule"[2] is a very suggestive indication of what may be coming—but it has to be remembered that the study of the child both ontogenetically and phylogenetically is now beginning to produce a body of knowledge that cannot fail to prove of value in determining the highest possibilities of any given child. It is true that we have as yet made comparatively little progress towards a more or less objective standard of even mental capacities, to say nothing of the wider range included under the general terms of feeling and willing. Professor Alfred Binet's

[1] L. Dugas: *Le Problème de l'Éducation*, p. 300.

"L'enfant montre des dispositions pour telle ou telle specialité—Plaisanterie! Sauf quelques petits Pascals, quelques petits Paderewskis, quels sont les enfants qui témoignent, à dix ans, d'aptitudes spéciales vraiment indicatrices? Tel ne rève que machines qui sera poète; tel sera volontiers huissier à trente ans qui, à douze, inquiétait sa famille par des apparences contemplatives et une extrème sensibilité. A cet âge, l'être physique se forme, rien des contours définitifs n'est arrêté." M. Prévost: *Lettres à Françoise* IX.

[2] *British Journal of Psychology* for June, 1906.

Échelle métrique de l'intelligence[1] is at least a beginning of the serious attempt to introduce a standard of general capacity. It has to be admitted that there is a considerable difference of opinion regarding the particular scale to be adopted. Binet's results are being tested at the present moment in a great variety of ways, and there are those who are inclined to believe that a less detailed scheme is more likely to give useful results. It is sometimes held that a general analysis of the processes that mark intelligence would form a better guide than the elaborate yet somehow inconclusive results of the *échelle*. Binet himself has made such an analysis. He maintains that intelligence is included in these four words: "Comprehension, Invention, Direction, Criticism (*Censure*)."[2] In actual experience, however, such a general scheme of analysis does not prove of much practical value, though it has its use in guiding investigation. On the other hand, the detailed analysis of the *échelle* when it has been corrected by the results of future investigations, may well produce a valuable touchstone of capacity.

It is a matter of some interest that as a by-product of the otherwise deplorable system of individual examinations and payment by results in the elementary schools of England and Scotland, there was developed a sort of standard of capacity for a particular kind of work—the work of acquiring a special kind of knowledge and using that knowledge for examination purposes. The requirements for each school year were laid down by the Education Department. At certain ages children were expected to have attained a certain amount of knowledge that had been more or less arbitrarily determined by officers of the Department. In actual practice the list of requirements for each "standard" in school came to be a sort of *échelle* of capacity. If a boy could not pass in the standard to which his years committed him, he naturally ranked as a dullard. If he were a standard or so in advance of what

[1] *Les Idées Modernes sur les Enfants*, p. 126.

[2] *Op. cit.* p. 118.

his years demanded, he was regarded as of high intelligence. Teachers, and even the ordinary public, in Scotland at any rate, got into the habit of speaking of boys and girls not as of such and such an age, but as being in standard so-and-so. Intelligence was for the time being standardised. No one who was familiar with the old standard examinations in elementary schools will be able to read Binet's *échelle* without noticing a similarity in the two tests. Indeed, this investigator has only revived consciously and deliberately a system that was formerly applied with more or less conscious intention of making it a general test of capacity. The requirements of the old standards were indeed used for what their name implied, but were used to measure not capacity but attainment. Primarily meant as means of measuring the money value of the communication of certain bits of information, they came in the teacher's hands to be a means of estimating ability, though this ability was limited to a rather narrow range, in fact to the power of acquiring knowledge for examination purposes.

In our final chapter we shall deal with certain lines of investigation into the elements of capacity, but for our present purpose it is sufficient to say that it is getting increasingly practicable to form a serviceable estimate of the possibilities of each educand. Exceptions to our rules will occur; there will be unforeseen retardations and accelerations. But with the newer methods there should not be so many cases in which the future development of a boy astonishes his teacher. At present the cause of the surprise is usually that the boys are tested in one medium in school and in a totally different medium in life.[1] But

[1] Though it has to be admitted that even in purely scholastic matters teachers are not always able to foretell future distinction. Enquiries were made by the London County Council as to the career at elementary schools of some half-dozen boys who had afterwards obtained high honours at Oxford and Cambridge. The replies given by the teachers of the elementary schools were to the effect that the masters had noticed nothing remarkable about the boys in question, and that they had been promoted in only the ordinary way, that is, they were advanced one

the newer methods of testing are not confined to school matters alone, but to the whole of human nature whether it reacts on school conditions, or on home or outside conditions.

Assuming now that we have an approximate knowledge of the line of development best suited for a particular educand, and of the distance along which he may be able to follow that line, we have the problem of how far and in what way the educator can assist in the process of development. The ego acts upon his environment and is reacted upon by it. He advances in knowledge as he advances in skill by a process that may be fairly described as a conflict between opposing forces and their reconciliation. The rhythm of thesis, antithesis and synthesis goes on all the time, and progress is the result. The question for the educator is what share he ought to take in this process of struggle by which advance may be made. It would seem that in a struggle between the educand and the environment the educator must take the side of the educand. But suppose that he does so, what happens? So far from helping the educand he really hinders his progress. There is no more common, as there is no more dangerous, error of the teacher than this partisanship in favour of the educand. The boy is struggling with the concept of the abstract noun, for example. Very probably the problem has been set him before he is ripe to deal with it in a natural way. In any case he finds it extremely difficult, and his master comes along with a cut and dry definition that the boy makes shift to use intelligently when occasion arises, without at all understanding what underlies it. He may be able to detect the kind of noun that must be called abstract in his parsing lesson, and he thus has the practical advantage of making ends meet in his school work, but misses the real knowledge the teaching of

standard per year. This may imply a criticism of the methods of the elementary schools. It may also mean that the world of Oxford and Cambridge is so different from that of the Board School that there is no common ground between them.

grammar is supposed to give. What is true in teaching is equally true in education. The educator may manipulate the environment in order that it may produce a specific effect upon the educand, but he must not superimpose a simplicity that, from the pupil's point of view, does not really exist. The wide generalisations about life and conduct that are of practical service to the fully developed man must not be transferred wholesale to the child. He must be led to them by a course of experience. It is in the directing of this experience that the educator is exercising his legitimate function.

While as the result of his own experience the educator is able to stand outside of the present experience through which the educand is passing, he must work by means of the environment. He must form a part of the environment against which the educand acts. We must exercise our influence by means of the educand's limitations. If we can so modify the environment that the educand must react upon it in a way that we have previously determined, we seem to be able to influence the educand directly, and so to restrict his powers of free self-development. Yet the very power thus exercised is possible only because of the laws according to which the educand as an organism develops. If the developing organism responded capriciously to given forces, it could not be said to be self-determined. A perfectly unlimited self ceases to be a self at all, and becomes meaningless and unthinkable. If then the educand answers the educator's stimulus exactly as the educator expects, it is because the nature of the educand demands that this reaction and no other shall follow this stimulus.

It may here be objected that if this be so, man-making is really possible: the educand is like clay in the hands of the potter. All the educator has to do is to discover the laws according to which the educand develops, and apply this knowledge. To this a cheerful assent may be given. So far as the educator is able to manipulate the environment, and so far as he has mastered the laws according to

which the educand develops, so far is the educand in his hands to make of him what he will. Nor does the admission in the least endanger the independence of the educand as a self-determining organism. The educator can make of the educand what he will *only by obeying the laws of the educand's development.* The very freedom that marks the self-development of the educand is the necessity that impels him to act as the educator leads him to act. The educand realises himself fully and freely in the environment that has been modified by the educator. Not less freely and fully does the educator realise himself in the environment that he has modified. From too close a standpoint there is here a plain contradiction. How can a child be at the same time self-determined and determined by another? Viewed from a higher level the contradiction disappears, and the two forces, the educand-ego and the educator-ego, are seen to be parts of a wider organism within which each finds its only possible freedom in attaining a harmony with its surroundings, in acting thus and thus and not otherwise.

But if all this be true it may well be asked: Why then do educators, as a matter of fact, so often fail to obtain this determining power over the educand? If we can mould men to our will why do we not mould them to better purpose? It is generally admitted in a vague way that the educator does modify the character of the educand, but there is generally a vigorous *caveat* about the limits within which he is restricted. When the matter is looked into, these limits are found to be constituted by the amount of the educator's knowledge or intuition of the laws according to which the educand-ego is self-determined, and by the amount of control the educator is able to exercise over the environment. Our failures as men-makers result mainly from three causes: ignorance of the laws of development, lack of power to modify the environment, and moral incapacity on the part of the educator. For our present purpose we may be allowed to make the daring assumption that the educator is morally all that he

should be. If to this moral perfection we could add complete knowledge of the *naturel* of the educand and of the laws of its development, along with sufficient power to manipulate the environment for educational ends, we might fairly claim that of the educand we could make what we will: the only limitation being the possibilities of the individual educand in question.

There is here a good deal of the subjunctive mood and a heaping up of conditions. Out of this complexity comes the freedom of the educand. Most of the conditions centre round him. If the educand must respond in a fixed way to certain stimuli, he seems to lose his freedom. But the educator can exercise his compelling power only on the condition of respecting the individuality of the educand. It might, indeed, be quite naturally objected that in the educational process it is the educator whose freedom is in danger. He must modify all his activities in such a way as to produce the desired reactions. He must subordinate himself to the laws of development of another. He must stoop to conquer.

There is, however, no real loss of freedom on either side. There is no fatalism in the ordinary sense of that term. Educator and educand develop alike according to the laws of their being. The great bulk of human activities are more or less strictly determined, but in every ego there is that margin of freedom that is determined by individuality. Even when we *have* to do things, we do them in our own way. This narrow zone of freedom is the real living centre of individual human existence, the "growing point" of the spiritual as opposed to the material life. It is one of the facts that limit the power of the educator; its working is one of the laws that the educator must master ere he can exercise the full power of education. The fact that a complete knowledge of the nature of the educand would enable the educator to modify the development of the educand, in no way interferes with the free self-development of the educand. Such complete knowledge is admittedly unattainable, but supposing it to be

attained by the educator, he would by the very fact of possessing this knowledge cease to be a mere educator. He would have risen to a point of view from which he could look with full comprehension on both parties in the work of education. He would see that educator and educand in their action and reaction on each other are each realising themselves while they are gradually working out differences, and attaining ever higher and higher levels, at each of which certain of the antagonisms of the process disappear.

But the educator is not as one of the gods. He seeks his own development while directing the development of others. What causes it to appear that the ego of the educator dominates the ego of the educand is that the educator always acts from a somewhat higher level of experience. He cannot indeed rise to such a height as to envisage in one sweep all the antagonisms and reconciliations that make up the entire sphere of education; but he is always working from a level high enough to resolve the immediate antagonism that makes up the *now* of education at any given moment.

CHAPTER XI

THE MECHANICAL VIEW

To the educator there is something specially attractive about the sensationalism of Condillac. There is comfort even in his assurance, though the idea dates back to Occam, that there is nothing in the intellect that was not first in the senses. For, after all, the educator can do something with the senses ; they are more in evidence than the intellect. But Condillac went farther, and taught that not only the content of consciousness but all its processes and activities are merely elaborations or transformations of simple passive sensations. This simplifies matters considerably, but what specially endears Condillac to the educator worried with the complications of philosophical schemes, is the expository device of the statue that gradually develops the various elements of spiritual life. There is something soothing and restful about this statue waiting placidly till element after element appears. As only one single sensation arises at a time the educator has leisure to examine it and put it into its proper relation to the others that have preceded it. It is all so like what the educator has longed for, and so totally unlike what happens in the presence of the real, live, ever-changing and excessively complicated educand.

This comfortable mechanical arrangement is usually associated with materialism, which certainly lends itself particularly to this form of presentation. Though Condillac himself "n'était pas matérialiste," yet "il se trouve avoir rédigé le code du matérialisme." Among the

genuine materialists the educator finds himself in very optimistic company. Matters are smoothed out, and many of the distressing complications of the educator's relations to the educand disappear when human nature may be treated on a mechanical basis. A machine may be very complex, no doubt, but there is always the possibility of stopping it, and examining it at our leisure. It is the educand's persistence in going on all the time that is so maddening to the conscientious but hesitating educator. Unless the machine can be stopped, the most of its charm for the educator is gone. Oliver Wendell Holmes has a figure that can be used in a very disagreeable way. He has the fatiguing fancy that we are all seventy-year clocks, wound up at the beginning and ticking off our lives. What could be a more exasperating conception for the educator than to imagine his pupils as seven-year-old clocks that come and sit on his benches and tick away their different stages of development, while he can only sit outside and wonder what is going on within.

La Mettrie, the father of French Materialism, has a tract that bears the suggestive name *L'homme Plante*. The educator naturally turns to it with expectations of the sort of treatment that he finds under the same title in Luther Burbank's *The Human Plant*. But, instead, he finds only a very ingenious and somewhat gross comparison between human organisation and plant organisation. The opuscule was evidently thrown off to gratify an aesthetic whim of the author. It is different when we come to his *L'homme Machine*. Here we have the mechanical theory worked out in full detail, on a purely materialistic basis. At any rate it is meant to be purely materialistic, but as is so often the case there is a breakdown at a crucial point. Man is a machine, and behaves like a machine in every way but one. The little book is not only brilliant but actually convincing, were it not for the little difficulty of motive power.

"The human body is a machine that winds up its own springs; a living image of perpetual motion. Food nourishes what fever

stimulates. (*Les alimens entretiennent ce que la fièvre excite.*) Without food the soul languishes, becomes unwholesomely excited, and dies in depression. It is a candle in which the light revives just at the moment of extinction."[1]

As he remarks a couple of pages further on, "Everything depends on the way in which our machine is wound up." But this involves the giving away of the whole position. To the educator on the outlook for a satisfactory explanation of his problem, the passing from the plant figure to the machine figure seems at first sight an advance. The plant after all has a power of its own. It can be constrained in many ways no doubt ; but it remains wilful to the end, and in the last resort, by the conclusive expedient of dying, it is always able to get the better of the man who seeks to carry its training beyond a certain point. The machine offers no such radical resistance to man's constraining powers. It is amenable to all the forces he can apply, and any failure to respond can be accounted for by physical laws that lie outside of its own nature as machine. But if we are to have the machine setting itself up as self-regulating, it is as difficult as the plant. The reference to perpetual motion is not a very happy one, if La Mettrie really wants us to take him seriously. It is noticeable that while in his enthusiastic description of the machine he is direct and unambiguous, "qui monte elle-même ses ressorts," he uses the passive form with its lack of reference to the agent, when he tells us that everything "dépend de la manière dans laquelle notre machine est montée."

The truth is that here, as so often occurs in the mechanical explanation of spiritual function, the machine for this occasion only, ceases to be a machine and becomes an organism. As an expository device the figure of the machine is excellent, but as an explanation it is a failure. La Mettrie, like all his fellows, has to insinuate somewhere or other the activity necessary to make the machine do what only an organism can do. To be just to

[1] *Œuvres*, vol. iii. p. 123.

La Mettrie we must not forget that he is generous in his distribution of souls. As against Descartes, he does not care to treat animals as mere automata. In his *Les Animaux plus que Machines* he takes as his motto Molière's line

"Les bêtes ne sont pas si bêtes que l'on pense,"

and in the text does at least as much for animals as he does for man. His references to the Leibnizian monads do not add to the clearness of his treatment, and the general effect on the reader's mind is that the author has tried to deal with man on purely materialistic lines, and has been unfair and unsuccessful in the attempt.

But the notion of man as a machine is attractive not only to professional philosophers; it forces itself upon the practical person who makes no pretence to philosophy. The mechanical nature of human reactions was so impressed upon Mark Twain that after thirty years' observation and recording he was driven at last to publish a book, which appeared under the title of *What is Man?* He has no difficulty in finding an answer:

"Man the machine ... is moved, directed, COMMANDED, by *exterior* influences—*solely*. He originates nothing, not even a thought."[1]

The little book is full of confirmatory examples of the mechanical nature of human reactions; but the curious thing is that in spite of man's incapacity to originate anything, he is evidently to be held responsible for what he does. Though his whole life is an unbroken chain of mechanical reactions he is to have his ideals, and somehow or other carry them out. Mark Twain is constrained to sum up the teaching of the book in an Admonition on which he lays very great stress:

"Diligently train your ideas upward and still upward toward a summit where you will find your chiefest pleasure in conduct which, while contenting you, will be sure to confer benefits upon your neighbour and the community."[2]

[1] *Op. cit.* p. 8.

[2] *Op. cit.* p. 82.

This combination of pure mechanism and ethical exhortation is not confined to American humourists—though it may not be unnecessary to add that Mark Twain is in deadly earnest in *What is Man?* There could be no greater mistake than to imagine that there is anything humorous in his intention. One of our most successful novelists, Mr. Arnold Bennett, has published a little book, *The Human Machine*, that is really a stirring sermon from beginning to end. The truth is that both writers begin by calling man a machine, and then proceed to treat him as a machine *plus something else*. In real life neither of them would exhort a machine, and when Mark Twain does this he is really begging the whole question of the nature of man. He is actually insinuating an ego into a machine. Bennett realises this, and frankly introduces an ego, and tells his reader explicitly "Your brain is not yourself. It is only a part of yourself, and not the highest seat of authority."[1] A few lines further down on the same page he puts the first great principle of the human machine in the italicised words: "*The brain is a servant, exterior to the central force of the Ego.*" At the expense of a little vividness in the illustration, Mr. Bennett has put himself right with his intelligent readers.

Had he cared, Mr. Bennett could have denied the existence of the ego, and sheltered behind no less an authority than Professor Huxley, who also regarded man as a machine, and yet denied that there was any such thing as what he calls "that masterful entity, the ego."[2] This he maintains is a mere figment of the imaginations of those philosophers who assert that there is a sort of mystery in consciousness, and therefore need something to keep them in countenance. Of course if consciousness be a mere epiphenomenon, the body may reasonably be treated as a machine. But in that case a sensible person should give up preaching to it, and Professor Huxley should not trouble our machines with that admirable figure

[1] *Op. cit.* p. 25.

[2] See his *Hume*, English Men of Letters Series, p. 73.

of his about the chess-board of life.[1] If mechanism will have us win the game let mechanism see to it without our stir. For however favourable to external education the mechanical theory may be, it is fatal to self education. On the mechanical basis there can be no such thing as subjective education.

In practice the consistent materialists justify this distinction. They are in the highest degree optimistic about education, but the education they have in view is always objective. When Helvétius bluntly tells us: "L'éducation peut tout," he has in view the ordinary education given by an external educator. D'Holbach's definition of education runs:

> "Education is nothing but the art of causing men to contract early, that is to say, when their organs are very flexible, the habits, the opinions, and the modes of life (*façons d'être*) adopted by the society in which they will live."[2]

Elsewhere he speaks of it as the art of "modifying, fashioning and instructing children" so that they shall be of use to the state and a source of happiness to themselves.

The educand may be regarded as a machine, but in that case the educator has to do the winding up. The machine may be well or ill made, but in any case it is in the hands of the mechanician educator.

The quality of the machine raises questions of the utmost importance to the educator. The limitations involved in the physical nature of the educand form a depressing subject for all but the materialists. They lay stress rather on the fact that the human body offers the very opportunity that we seek in our efforts to modify the human soul. D'Holbach has not failed to profit by the teaching of Descartes, who said that if we followed experience instead of prejudice it would be medicine that would supply moral science with the key to the human

[1] See *A Liberal Education*, Collected Essays, vol. iii. p. 81.

[2] *Système de la Nature* (Londres, 1770), vol. i. p. 140.

heart. About temperament d'Holbach writes in the most cheerful way:

"Indeed it is not to be doubted that man's temperament may be corrected, altered, modified by causes as physical as those which constitute it.[1] Each of us can in some sort make a temperament for himself; a man of sanguine temperament by taking food stuffs less succulent and in smaller quantities, by abstaining from strong liquors, etc., can succeed in correcting the nature, the quality, the quantity of the movement of the fluid which dominates in him.... A European transplanted into Hindostan becomes little by little quite different in mood (*humeur*), in ideas, in temperament and in character."[2]

Before examining D'Holbach's optimistic materialism it may be worth while to cast a look backwards to see whether there is anything in the older theories that corresponds in any way to his manipulation of the temperaments. Is it not just possible that that ill-understood Greek theory of Katharsis or purgation may be regarded as an attempt to modify the temperament by means of music and the fine arts? The balance of opinion among classical authorities appears to be clearly in favour of the medical metaphor that implies that the Greeks looked to the fine arts to do for the soul what medicine does for the body. It is probably impossible for us moderns ever to enter fully into the view of music held by the old Greeks. They obviously expected much more from it than we do. It is hard for us to understand the spirit in which it was treated as a daemonic influence. We can appreciate its practical use as in the case of David playing before Saul to drive away melancholy. But the Greeks evidently believed that they

[1] D'Holbach takes the crudest view of temperament: "Le tempérament dans chaque homme est l'état habituel où se trouvent les fluides et les solides dont son corps est composé. Ses tempéramens varient en raison des élémens ou matières qui dominent dans chaque individu, et les différentes combinaisons et modifications que ces matières diverses par elles-mêmes éprouvent dans sa machine. C'est ainsi que chez les uns le sang abonde, la bile dans les autres, le flegme dans quelques-uns etc." *Système*, p. 122.

[2] *Système de la Nature* (Londres, 1770), vol. i. p. 125.

were able to attain much more specific results, and that the different kinds of music produced qualitatively different effects, and that by a skilful manipulation of the proper sorts at appropriate times, quite definite and predictible changes could be produced in at least mood, and probably also in character. The action appears, however, to be always negative, the drawing away of certain energies that might prove deleterious. It looks at first sight as if what is meant is a sort of safety valve to draw off superfluous and dangerous energy. This may be reasonably applied to the case of music; but when we come to the other arts where we work more definitely on the ideational plane different interpretations are possible.

With regard to the drama, for example, it would appear as if by experiencing at second hand certain of the more disagreeable emotions involved in a tragedy, the spectator worked off forces that might lead to tragedy in real life. It would almost seem as if the Greeks had anticipated William James' doctrine of emotional insurance.[1] But there is danger of this safety-valve theory working in quite a different direction. It might be developed into the wild oats theory, or what may be described as moral vaccination. The educand may be inoculated with mild vices in order to avoid the stress and strain of the greater. But it must never be forgotten that a little practice in vice means a little training in vice, that and nothing else. The strength that comes from meeting and resisting temptation is one thing, the moderate indulgence in vice in order to draw the sting of temptation is another. Nowhere is the need for specific education greater than here. We shall never succeed in training a man to virtue by practising him however skilfully in vice. Every yielding to temptation means an easier yielding next time. Nor does the joining in

[1] "Be systematically ascetic or heroic in little unnecessary points, do every day or two something for no other reason than that you would rather not do it, so that when the hour of dire need draws nigh it may find you not unnerved and untrained for the test." *Principles of Psychology*, vol. i. p. 126.

doing evil that is implied in the observing of others doing evil on the stage, help in imparting power to resist temptation, except in so far as the sight of evil deeds is followed by the sight of the evil consequences.

It seems unlikely that the Greeks reasoned in this way at all. If they had reasoned out the matter on ideational lines there would probably have been a clear statement of the theory recorded somewhere. As matters stand, it seems much more reasonable to suppose, backed by the analogy of music, that Katharsis really meant the sort of general emotional effect produced by suitable stimulation, something nearer a hypnotic effect than anything else ; in which case it is not so unlike the sort of effect that D'Holbach would have sought and approved of.

So far as he confines himself to the general statement that it is possible to modify the temperaments at the will of the educator, and that, in addition, the child comes into the world quite neutral so far as morals are concerned,[1] D'Holbach makes a very favourable impression. We are thus supplied with a plastic medium in which to work, and are assured that we have no moral bias to overcome. It is little wonder that educators who can accept these conditions are delighted. The educand is really clay in their hands, and they can make of him what they will.

The moral clean sheet need not give rise to much difficulty. It is a point that cannot be very well settled by argument. The balance of evidence in connection with the heredity of acquired characteristics is in favour of the neutral view, and so far as it is an open ethico-metaphysical question, D'Holbach is as much entitled to an opinion as anyone else. But when it comes to temperament, we find his arguments exceedingly crude. We have already admitted, in dealing with the Data of Education, that in a general way dietary has an effect on temperament. But this comes very far short of the power of "correcting, altering and modifying" temperaments. D'Holbach has

[1] "La nature ne fait les hommes ni bons ni méchants." *La Système de la Nature*, (1770), vol. i. chap. ix. p. 149.

advanced nothing fresh, and his remarkable confidence appears to arise simply from the common error of supposing that when we have stated a spiritual problem in terms of matter we have somehow explained it.

This is specially clear in connection with the brain. The undoubted parallelism between brain process and mind process leads to the belief that when we have stated the brain process we have somehow explained the mind process.

"Nevertheless, it is by reference to the body, to the nervous system and the organs attached to it, that we explain mental phenomena. The nervous system does not cause, but it does explain mind."[1]

From the context we gather that Professor Titchener here means no more than such an explanation as a map gives of a country. This is exposition rather than explanation. That a knowledge of the nervous reactions corresponding to mental function is of the highest value will not be questioned. But it is one thing to acquire a working knowledge, it is another to explain. Even if the materialist were able to refer every idea that passed through the mind to its own individual nerve cell, we would be as far away as ever from an explanation of the relation between mind and matter. When treated as independent of each other they belong to different worlds, and even when we regard them as only different aspects of the convenient *tertium quid*, we are no further forward in the matter of passing from one to the other by direct educational process.

It is only natural that an attempt should be made to approach education from the purely physical side, to deal with it in terms of nerve and muscle rather than of idea and feeling. It cannot be denied that the educational process results in a modification of the nervous reactions, but it does not bring us any nearer the truth to speak of educating the nerves. Professor James is right in advising us to make a friend of our nervous system rather than an

[1] E. B. Titchener, *A Text-book of Psychology*, vol. i. p. 39.

enemy; but his advice goes no way to explain how we can get at the nerves in order to be friendly with them. If we turn to R. P. Halleck's book with its daring title *The Education of the Central Nervous System*, we find that after all he approaches the nerves through the mind, and not the mind through the nerves. It is sometimes said that Psychology can be of no service to education. The statement is preposterous, since education depends for its knowledge of the individual upon a study that must be called psychological. What is really meant is that much of the elaborate study of the relation between the nerve process and its mental equivalents is of no value to the educator. Münsterberg tells us that:

"There was never a teacher who would have taught otherwise, or would have changed his educational efforts, if the physiological substratum of the mental life had been the liver or the kidneys instead of the brain."[1]

It is quite possible that even this statement may have to be modified when further investigation enables the psycho-physiologist to give further detailed information about the peculiarities of different types of brain structure. But in any case whatever progress is made will come by advancing from the mental side, not from the physical.

A certain difficulty arises in tracing the effect of materialism on the evolution of educational theory. We are not surprised at the ancient materialists neglecting education. It did not naturally enter as a matter of course into ancient philosophy. But there is a difficulty in explaining how it came about that while the French materialists of the eighteenth century were so intimately associated with education, the materialistic school that flourished in Germany in the middle of the nineteenth century has had no direct educational influence. The explanation seems to be that the materialists of the Enlightenment were under totally different influences from those under which their successors lived. The Frenchmen were in the midst of a

[1] *Psychology and Life*, p. 129.

great movement. They were belligerents. They had a direct interest in the things that were going on in the social and political life of their time. They were constructive as well as destructive. Not only were they opposed to l'Infâme, but they had certain ideals for the reconstruction of the state. They were men of the world. The Germans were students, many of them professors. They were more interested in the philosophical aspects of their work than in the practical applications. If one of the Enlightenment materialists had hit upon Moleschott's conception *ohne Phosphor kein Gedanke* we cannot imagine him contenting himself with poetical philosophisings about the possibilities of the phosphorus that the workman extracts from the earth only in order that another workman may put it back in another place. The Frenchman would have had at least theories about regenerating the world through the application of phosphorus in an educational way.

May it not be that we have here an illustration of the working of the underlying cause? Were not the Frenchmen optimistic through ignorance. They theorised and lightheartedly jumped to conclusions that would have been impossible for the more thorough Germans with the later contributions of science at their disposal. The best work in education is done by optimists: for pessimists it has no attraction: Schopenhauer has no treatise on education.[1] But we cannot assume that the German materialists became pessimistic from dealing with the same matters that made the Frenchmen optimistic. Nor can we blame the notion of evolution as introducing a depressing element, for among our English evolutionistic philosophers there has been a very decided and practical bias towards educational problems. Spencer and Bain have each written a book on education, and these are not only practical but hopeful. Spencer's little volume has had a very powerful effect in modifying popular views of education, however sharply it has been criticised by the *gens du métier*. No one sees

[1] His six pages on education out of the whole six volumes of his works, only emphasise his neglect of the subject.

more clearly than J. S. Mill the need for and the possibilities of education. Utilitarianism, more than most of the philosophical systems, needs education to keep itself wholesome, and Mill both admits and proclaims this. Though he has not written a book on education he has written some paragraphs that have proved seminal in educational theory. As Walter Bagehot's little book on *Physics and Politics* has led the way to a whole literature from G. Tarde onwards, so the following passage from the Logic has started a new line of investigation into character (particularly among French psychologists) that cannot fail to produce in time practical results of the first importance:

"A science is thus formed to which I would propose to give the name of Ethology, or the Science of Character, from ἦθος, a word more nearly corresponding to the term 'character' as I here use it, than any other word in the same language. The name is perhaps etymologically applicable to the entire science of our mental and moral nature; but if, as is usual, and convenient, we employ the name Psychology for the science of the elementary laws of mind, Ethology will serve for the subordinate science which determines the kind of character produced in conformity to those general laws by any set of circumstances, physical and moral. According to this definition, Ethology is the science that corresponds to the art of education in the widest sense of the term, including the formation of national character as well as individual."[1]

The mechanical conception of soul life is not necessarily limited to the materialists. Certainly the most striking application of a mechanical scheme to the theory of education is supplied by Johann Friedrich Herbart who claims to be a spiritualist, and bluntly says that materialism is an absurdity. Even within the realm of consciousness it is possible to trace the influence of physical conceptions. All the atomistic psychologies, for example, are built on such conceptions, and Herbart worked up a system that lends itself extremely well to educational applications, since it was practically made as the result of his educational thought based on a certain amount of teaching experience.

[1] *Op. cit.* bk. vi. chap. v. § 4 (original edition, p. 522).

Perhaps it is because of the physical analogies that Herbart is able to produce such a hopeful and practical pedagogy. According to Herbart, man-making is really possible. One cannot read him without perceiving that he believes in a process that would be described by the older psychologists in no other way than as an implanting of faculty.

Like the materialists, Herbart really begs the fundamental question. He assumes a soul of a particular nature, and all his principles are based upon that assumption. The materialists start with the idea that man is a machine, but they assume the machine to be in good working order. They do not go into the question of its origin. With Herbart the soul is purely negative. It has no qualities of its own save perhaps a vague resistance to change, a kind of sullen *vis inertiae*. It is merely the meeting-place of certain forces called by Herbart *Vorstellungen* or presentations, a term that may be perhaps on the whole best rendered by the word *ideas*. The soul then is practically a monad, though Herbart prefers the name *real*. We are accustomed to hear of Leibniz's slumbering monads, but the Herbartian real has never been awake. The Leibnizian monad is absolutely self-contained. It is independent, eternal, unchangeable. In opposition to all this the Herbartian real is absolutely dependent on outside influences. With Leibniz, the monad can receive nothing from without, with Herbart it is merely a framework within or around which experience gathers.[1] Out of the interaction between the negative soul and the ideas, somehow or other, the soul as we know it emerges. For Leibniz, development means nothing but unfolding, the bringing to light of what is already there. But with Herbart it is really a process of absorption by which the soul takes in, assimilates and makes its own all the appropriate materials that are available in its environment.

[1] For a very satisfactory treatment of the Herbartian monadology in relation to the Leibnizian (in both the educational and the philosophical aspects) see *A New Interpretation of Herbart's Psychology and Educational Theory*, by Dr. John Davidson (Edinburgh, 1906).

The Herbartian system of ideas must be admitted to be a pure mechanism. There is a clear dualism involved between the soul and the ideas. These are not evolved from the soul, nor is the soul really evolved from the ideas, or even built up out of them. Instead of the ideas being regarded as the various modes of activity of the soul, the different ways in which it responds to stimulus, they are regarded as forces, almost as independent forces, and now and again Herbart finds himself driven to speak of them as if they acted on their own initiative, instead of deriving from the soul itself whatever activity they possess. We have here, in fact, all the difficulties that are inherent in any atomistic explanation of spiritual process.

It is quite evident that Herbart feels keenly the difficulty of bringing a real unity into the manifold of his self-imposed conditions. Once the process is started, there is no difficulty in carrying it on. Indeed there is something peculiarly clear-cut and logical about the system by which he builds up the mental content into a hierarchy of forces. He is all but able to reduce the whole to mathematical formulae.[1] But while he is very successful in working out the relations of the ordinary groups of ideas or apperception-masses, there is one mass that gives him a great deal of trouble, and that is the ego-mass itself, if there is such a mass. He sets about evolving the idea of the ego. He works hard at it, spares himself no trouble, and expends amazing ingenuity in the process. But one cannot think that he is happy in the result. Professor Stout explains that in the last resort the Herbartian ego-consciousness resolves itself into an awareness of the psychological relation itself, the one element of experience that is common to all the soul processes,—thinking, feeling, willing and what not. But when Herbart has finished, we feel that his manifold remains manifold, and that any unity he has succeeded in introducing has been smuggled

[1] For the best account in English of the mechanism of the Herbartian Psychology see the articles by Professor Stout in *Mind* for 1888, 1889 (four articles in all).

in. The indolent *real* has had to be stimulated, for this occasion at any rate, to relinquish its allotted inactivity, in order to superimpose on the riotous ideas a unity that is supposed to be deduced from them. The plain truth of the matter is that Herbart has had to thrust into his machinery a concept that is not unlike the familiar "eternal ego." It comes to be a case of *petitio principii*. That Herbart is not satisfied with his unification is shown by the fact that when he comes to the other parts of soul process he feels impelled to do over again what he has already done in connection with cognition.[1] When he comes to the volitional, the difficulty of evolving a unity of the isolated elements involved in his data is manifest. He sees very clearly the fundamental importance of making good the unity of the soul in the face of moral problems, and is not lacking in courage.

He opens his lectures on Pedagogy with an attack upon the Kantian doctrine of the transcendental freedom of the will. The cause of the attack is to be found in the paralysing effect that Kant's view (as understood by Herbart) must necessarily have upon the work of the educator. Here as elsewhere, Education supplies an excellent touchstone to determine the value of a doctrine, since it submits it to the test of actual experience. If the will can rise to a region above and independent of time and sense and can determine its own manifestations, apart from external influences, then clearly there is no place for the educator in the work of moral training. For the same reason, Herbart rejects all the theories that lead to fatalism. If the mind and will are absolutely predetermined in their action, the work of education is hopeless; indeed it can have no work.

It is because Herbart rejects both transcendental freedom and fatalism that he has been able to attract not merely followers but devotees. For it has been possible for him

[1] For a treatment of the Herbartian system of ideas in its application to the cognitive side of soul life, and particularly in its educational aspects, see my *Herbartian Psychology Applied to Education* (1897).

to adopt a more positive tone in his educational writings than is open to those who are trammelled by the limitations which many of the current philosophical systems impose. We are not concerned to defend Herbart's position. We seek in the first place to understand it, and to discover the source of its popularity.

One of the favourite charges against Herbartianism is that its exponents become fanatics. Accepting this fact we have to explain it. Fanaticism is the seamy side of enthusiasm, so we need not be surprised to find in the fanaticism complained of a certain element that commands our respect, and claims our approval. What is needed, in fact, in modern educational theory is a little more of this hopeful element. We are so hemmed in by evolutionary theories with their ramifications into the forces of heredity and environment, that we are unduly depressed, and tend to become hopeless regarding our work as educators. Nothing great can be hoped for in the case of men and women who go about their educational work full of the conviction of how little education can really effect. Certain of our later writers seem to take a positive pleasure in emphasising the limits of education as a moral force.

To the hopelessness induced by this style of writing no system ever offered such a perfect antidote as does the Herbartian.[1] Whatever may be thought of the metaphysical and psychological foundations, we have here a system that promises a means of acting directly upon the character. It is common to maintain that knowledge has nothing to do with morals. We are confronted with picturesque contrasts of highly cultured scoundrels and illiterate saints, and are told that instruction may increase the social usefulness of a man, but it cannot affect his character.

In direct opposition to all this Herbart maintains that instruction supplies the only force that *can* modify char-

[1] Leibniz is certainly very encouraging with his "die Erziehung überwindet alles." *Werke* (Ed. Klopp), Bd. vi. p. 209. But he has no educational system like Herbart.

acter. This is indeed the core of his teaching. If all Herbartianism could be gathered up into one sentence, that sentence would be:

"The will takes its root in the circle of thought."[1]

In these words we have the beginning, middle and end of Herbartianism, for here we have the active side of the soul brought into relation with the passive. All action proceeds out of the *content* of the soul. We cannot think of what has never entered our souls. If "out of the heart proceed evil thoughts, murders" and the rest, clearly these must be already in the heart. All temptation is an appeal to the knowledge of evil that is already within us: in other words an appeal to the content of the soul, to the result, in fact, of instruction: not perhaps necessarily the deliberate instruction such as a teacher would give, but to instruction none the less. Herbart is the last man in the world to undervalue the instruction of experience. The point he emphasises is the power of the content of the soul. How that content is supplied is a different matter, and involves the vital question of how far the teacher can share in the supply of content.

Ignoti nulla cupido quotes Herbart[2] with approval. But he is not unaware of the difficulty of making mere knowledge the basis of morals. Knowledge is necessary to morality, inasmuch as it supplies the materials about which we can be moral. We cannot be moral *in vacuo*. Yet will is not knowledge, nor is it built up out of knowledge. Herbart is careful to point out that the will has its origin "certainly not in the details of *what* one knows, but in the union and working together of the ideas which have been won."[3] Even with this reservation the change of point of view, as compared with that of the older philosophers, is startling. There is room for the educator to do positive work. The circle of thought is his field of operations. He can introduce new elements and combine

[1] *Umriss pädagogischer Vorlesungen*, § 58.

[2] *Allgemeine Pädagogik*, Bk. iii. Kap. iv. § 15. [3] *Umriss*, § 58.

the old into new complexes. To a certain extent the circle of thought is at his mercy, and as a consequence, to that extent also, the will.

The trouble arises when we come to a consideration of the nature of the will itself. It is only fair in dealing with the nature and genesis of the will to give Herbart's own words: he complains that certain educators who

"come to the idea of freedom when they observe the individual who opposes himself to outer influences and often enough to the intention of the educator; but here they cannot grasp the nature of the will, but lose the concept of nature in that of will."[1]

In ordinary thought we regard the will as something given, something to start with, something that has to be developed no doubt, but that has its essence existing in every soul. It is a possession rather than an acquirement. In his theory of the will Herbart returns to his old fight in a new form. Locke fought the fight of innate ideas, and Herbart the fight of innate faculties. The popular idea of will is that it is innate. This naturally rouses Herbart's opposition. Why should the faculty of Volition survive the massacre of all the other faculties? Since he has already transferred all activity from the soul to the ideas, it is only reasonable that he should look to the ideas rather than to the soul for the origin of the will. We have just seen that he disclaims the *mere elements of what we know* as the source of will, and maintains that in the *interaction of ideas* we may find its beginnings. The distinction is perhaps best expressed by saying that ideas as mere presented content have nothing to do with will, but that ideas as presentative activity may be regarded as its source. The will is generated in the conflict of ideas. It is not a force that acts upon and regulates the ideas found in the circle of thought, but is really created by those ideas in their actions and reactions. In other words the will is the resultant of the interaction of ideas. It is simply one mode of their activity.

As this view of the will is so unusual, it is well to let

[1] *Umriss*, § 5.

Herbart himself give a description of how he regards its genesis to take place. In dealing with the Pestalozzian method of instruction he has an important passage that demonstrates the close connection he believed to exist among the different activities of the soul. It illustrates his strong antipathy to the process of isolating the various forms of activity. He no doubt felt that the ideas had a strong tendency to appear as individual entities, and were therefore liable to lead to disintegration of the contents of the circle of thought. Accordingly, he emphasises the more the unity and harmony of all the processes of the soul. The ideas as presented content stand for the substantive element, the ideas as presentative activity stand for the transitive element: and since the cohesion of the substantive elements is feeble, Herbart naturally sought as much interconnection as was possible among the transitive elements. Comparing plants, animals and men, Herbart says:

"Much more inconsequently acts the human being. He has understanding instead of instinct. This means that no other mechanism drives him but that which arises from the presentations which he has experienced, which he has perceived. These presentations are themselves forces which arrest one another, and which again help one another; they are powers which rise and hurl themselves, crowd and disperse, and even through this strife they fall into all the manifold conditions which by a much too general, much too vague a name we call *will*. What all does not lie in this expression *will!* Inclination, desire, fear, courage, choice, temper, resolution, reflection—good will that does not know *what* is good, evil will that imagines itself to be good—insight without resolution, resolution without strength, abhorrence of the crime that at the same moment is deliberately consummated—and what more phenomena there are which in their marvellous combination and dissociation, their ceaseless, continuous process of change and new appearance every moment put to blush and bring to nothing all the distinctions of philosophers between understanding and will, between reason and caprice, and between compulsion and freedom."[1]

[1] *Über den Standpunkt der Beurtheilung der Pestalozzischen Unterrichtsmethode.* Bartholomäi's edition (1891), vol. ii. p. 227.

Into this chaos Herbart must somehow or other introduce order. If he cannot find a principle, he can at least invent one. He does not feel called upon to give such exact definitions of the various processes as are found in the philosophers who are put to the blush in his description. But he must at least account for the facts that we find in our own experience. There we discover that we have an activity that is usually called will. If it is not what it is ordinarily understood to be, we feel entitled to ask Herbart what he makes it out to be.

We may here take for granted the processes by which the individual ideas are grouped into apperception masses,[1] as these do not at present concern the argument. But we must now look into the laws according to which the masses themselves work, in order that we may disentangle that process that is specially to be regarded as will on the Herbartian principles. We may assume that interest is the pleasure-pain tone that accompanies attention, and that attention is really the focussing of consciousness. Interest and attention, therefore, accompany all the activities of the soul. But the nature of the hedonic tone is continually changing, both in quantity and quality; that is both in intensity and in its characteristics. Sometimes it is keen, sometimes dull: sometimes it is pleasurable, sometimes painful: and between the extremes are infinite gradations. These differences are naturally correlated with the various processes going on within the soul. Suppose that a strong and well-organised apperception mass holds the field of consciousness, and that along with it, but with a greater degree of obscuration, exists one or two other masses congruous with the prominent mass. There is more or less intense interest, and the tone is on the whole pleasurable, though not necessarily intensely so. Now suppose that, through the interaction of the elements of the apperception masses concerned, a certain other mass is recalled to the threshold, one of three things may happen. First, all the elements already within the consciousness may be

[1] See my *Herbartian Psychology Applied to Education*, chap. iii.

opposed to the admission of the new mass. In this case only a temporary uneasiness occurs. The hedonic tone is painful but momentary, for there is no difficulty in expelling the obnoxious mass, and peace is at once restored. The second possibility is that all the elements at the time in the consciousness may welcome the new mass that claims admittance. Here the hedonic tone is pleasurable, its intensity depending upon the relation among the various masses involved. The new mass is easily and immediately admitted, and again there is a rapid establishment of equilibrium. It is the third possibility that gives rise to trouble. This case arises when some of the elements at present in consciousness welcome the new mass, and some of them seek to reject it. This time we have a distinctly painful hedonic tone, but the pain continues longer than in the first case. Its intensity depends on the nature of the struggle for admittance. If the forces are almost equally divided the interest is intense: if one set of forces is much stronger than the other, the interest is feebler. But so long as the struggle lasts there is a more or less painful interest. By and by when the new mass is either rejected or admitted, equilibrium is restored and the hedonic tone is pleasurable.

Many considerations have to be taken into account in estimating the effect of the interaction of the various forces. Notably there must be a distinction in regard to the nature of the recall by which the new mass has been enabled to make its appearance. A mass that arises by mediate recall depends for its chance of success on the certainty of finding some friends at least among the elements of the masses at that time in possession of the soul. On the other hand a mass that arises by immediate recall, has to depend largely on its own presentative activity.

Speaking from the standpoint of the plain man with no theories on the subject, we naturally take it for granted that the soul prefers those masses that under given conditions give rise to a pleasurable tone, and dislikes the

other kind. Further, the soul goes out of its way to encourage certain ideas to enter. This active encouragement or discouragement of ideas is usually known as *desire*. This has two forms—positive and negative. These may be called inclination and aversion, though in common speech *desire* by itself is usually confined to the positive form.

Now in the Herbartian psychology the desires are not primarily the quality of the soul but belong in the first instance to the ideas, or rather are generated by the interaction of the ideas. When a mass of ideas claims admission, and the masses at present in possession of the consciousness are favourable we have desire, positive desire. But even when there are both hostile and friendly elements within, we have desire though this time it is both positive and negative.

Desire is thus always an activity, but not necessarily an effective activity. It is true that in such a case as we have just referred to, desire of the one kind or the other must be gratified, since the new mass must be admitted or rejected. But here we find ourselves looking at the matter from the point of view of the soul—as we are continually doing in our treatment of the Herbartian position—and misunderstanding it in consequence. From Herbart's point of view desire may be said to be always positive, since each apperception mass naturally seeks to enter the consciousness, wherever it be that the force that generates this effort comes from. In this bewildering Herbartian mechanism we have to keep continually reminding ourselves that all power originally comes from the soul itself, though for purposes of exposition we are always being tempted to speak of the mental elements as if they had an independent activity of their own.

In the case of the immediate reception of an apperception mass that seeks to enter the consciousness, desire hardly arises at all. Desire always involves an element of resistance. An external mass wants to enter the consciousness, the internal masses wish to keep it out. Both cannot

succeed. Thus what a mass desires does not always come to pass. If, however, on several occasions a given mass succeeds in its efforts in relation to another mass under the same conditions, the first mass begins to look upon its success as a likely thing, every time that it is brought into relation with the other. Thus to desire proper is added the expectation of success. By and by this expectation reaches the point of certainty, and we have *will*. We will only what we can bring to pass: we desire a great deal more than we will.

"He, then, who says *I will* has already made himself in thought master of the future; he sees himself already accomplishing, possessing, enjoying.

Show him that he cannot; already he wills no longer, since he understands you. Perhaps, however, the desire will remain, and rage with all impetuosity, or make attempts with much slyness. In this attempt lies a new will, no longer regarding the object but the movements which are made—with the knowledge that they are within his power—and with the hope that he will be able by means of a clever combination of these to attain his end. The general desires to conquer, therefore he wills the manoeuvres of his troops. He would not thus will were he not conscious of the power of his command. But we may will (the example is from Jacobi) to dance as a Vestris can will to dance. To many the desire thus to will may not be lacking, and doubtless the training of the master began in desire, but also his will could certainly not hasten the gradual success by a single step, but at the best follow at its heels.

Action, therefore, brings forth the will out of desire."[1]

In all this we seem to have an independent will formed. But it appears to be a will of the many rather than a will of the one. The numberless ideas that in their proper series hold the field of consciousness seem to agree among themselves to act in a certain way, and this agreement we have called will. But we have an uneasy feeling that there is something shadowy about all this. Those ideas, those "living creatures having hands and feet" seem to have usurped the place that belongs to what we usually

[1] *All. Päd.* Bk. iii. Kap. iv. § 7-9.

call personality. However this thing called *personality* is to be accounted for, it clearly exists, and must be dealt with. Herbart's explanation amounts to saying that we are searching for what we already have. The ego, or the personality *is* the sum of the laws according to which the ideas react upon each other. We have seen that he attempted not very successfully but still honestly to deduce the ego[1] from the ideas and their laws. It is an apperception mass like the others in most respects, still it is not only the most powerful of all, but it stands in a peculiar relation to all the others. It is not only allied to them all, but it interpenetrates them, and exercises a certain cohesive control over them. It is thus *sui generis*. It is not merely *primus inter pares* but it has risen above them all, and Herbart is not happy about it. At this point in fact he has to face the problem that sooner or later interferes with the harmony of any theory that starts with an atomistic basis. The ego and the non-ego, the subjective and the objective remain persistently apart, in spite of all the atomists can do to build the one up out of the other. So uneasy is Herbart about this question of personality that he sets about restoring harmony among his disjointed ideas by introducing his distinction between the subjective and the objective sides of character.

We have here an interesting parallel between the cases of Herbart and Locke. As Locke turned back the mind upon itself in order to get a knowledge of the mind itself, so Herbart turns back character upon itself in order to give it unity and harmony. As Locke found that there was something in experience that could not be quite accounted for by sensation, so Herbart found that his mechanical genesis of the will left something unexplained.

He recognised that as there were differences in the nature of volitions according to the nature of the apperception masses involved, there was a difficulty in so reconciling

[1] Of special interest in connection with the Herbartian treatment of the ego is the practically complete separation of *act* and *content* now claimed by the Austrian School of psychologists.

volitions with one another as to form a harmonious character. He admits that one willing may not be in harmony with another, and accordingly he has set about finding some unifying principle. So long as the apperception masses are of an external character there is obviously no hope of reducing them to order without attempting that process that worries the German philosophers—exhausting the universe. Herbart knows of no principle that will reduce the manifold of sense to harmony. Like Locke, therefore, he looks within, to see if no unifying principle can be there found. He distinguishes among the kinds of presentations, and produces the following:

"Since, further, the human being finds himself especially in his willing, he commands himself, makes resolves about himself, seeks to master himself. In such attempts he makes himself more and more the object of his observation. That part of his will which in this self-observation he finds to be already present we call the objective part of character. That new will, however, which is first present in and with the self-observation must be called, in distinction from the former, the subjective part of character.

The second part can reach its full development only in maturity, but the beginnings occur already at boyhood, and they are wont to develop rapidly in the youth, although different in kind and strength in different individuals."[1]

What has really happened in this attempt to evolve the will out of the ideas is that the Herbartian soul has had to be awakened out of its philosophical slumbers. After this it can no longer pretend to have "no capacity nor faculty whatever, either to receive or to produce anything." It becomes at least doubtful whether it can any longer be maintained that "within it lie no forms of intuition and thought, no *laws of willing and acting*: nor any sort of predisposition however remote to all these."[2] Herbart has been driven, as all his predecessors were, to change his usual point of view, for once at least, in order to bridge over the otherwise impassable gulf. For this occasion the soul has had to become active, and all the rest is easy.

[1] *Umriss*, § 143. [2] *Lehrbuch zur Psychologie*, § 152.

Where we find Herbart lacking is in his treatment of that part of willing which the developing being "finds to be already present." This part we can imagine to have originated out of the clash of warring interests among the ideas. But then it must exist out of the range of the subjective will that is now introduced to examine it. The subjective or the objective will may be granted without scruple to Herbart, but to their combination he is not entitled without an explanation of how at least one of them was generated, and how the two were brought into relation. What Herbart means by a man revealing himself to himself "especially in his willing" usually appears in the idealistic philosophers as the dawn of self-consciousness.[1] But these philosophers are content to make an open assumption here, an assumption that they no doubt seek to justify, but which remains an assumption all the same. Herbart, on the other hand, believes that he has somehow or other been able to generate the subjective side out of the content of the soul, that is out of the objective elements. He here assumes the subjective side in precisely the same way that the ordinary dualist assumes the connection between the subjective and the objective. It makes little difference whether we jump from the objective to the subjective with Herbart, or from the subjective to the objective with Reid.

For this breach in the continuity of his thought we were prepared. From his bases we cannot be greatly surprised to find this rent in the veil. But now, accepting the breach, let us make the best of the position and see what use Herbart makes of his practical distinction between the two sides of character, especially in relation to his fundamental doctrine that all action proceeds from the circle of thought.

In working out the interaction of the two sides of character Herbart makes use of a term that strikingly illustrates his view of the essential oneness of all the activities of the

[1] For an excellent account of the facts of the case from the psychological point of view see the first chapter of J. M. Baldwin's *Social and Ethical Interpretations in Mental Development.*

soul. In ordinary use the word memory is almost universally restricted to intellectual operations. It is true that we commonly speak of the memory of a pain or a pleasure, or of remembering a desire or a volition. But an examination of our custom in these cases will make it clear that we are dealing with the memory of *an idea of* the different activities. In other words, our memory deals with the ideas as presented content, not as presentative activity. The material of memory is substantive rather than transitive. But Herbart boldly carries over the idea of memory, and applies it to the will as such. The tendency of the will to act in a certain way under a given stimulus he calls the memory of the will, and regards it as "the first requisite of character."[1] When the will acts uniformly to the various stimuli under identical conditions, the will memory is said to be good, and the resulting character to that extent satisfactory. From one point of view this amounts to no more than a new name for habit. But Herbart clearly attaches a somewhat different meaning to the whole process of repetition, for he seeks to combine the substantive with the transitive element. The will memory is treated to some extent as pictorial. Before the ego acts he has a sort of impression of the will process brought within the circle of thought, and his action is regulated by this impression. All this is excellent, but is not at all dependent upon the scheme by which the individual is deduced from the interaction of isolated individual elements. This theory had much better be quietly surrendered. It is not really essential to the Herbartian position in education, and it is significant to find that Herbart's successor in Philosophy as in Education, Eduard Friedrich Beneke, modifies his scheme in such a way as to allow of a more natural development. The activity that Herbart had to seek in his principle of arrest, Beneke finds nearer its source, and makes provision for a more energetic soul than the one that had satisfied his predecessor. Here is the description of the Benekian soul:

[1] *All. Päd.* Bk. iii. Kap. iv. § 25.

"A thoroughly immaterial being consisting of certain ground-systems which, not only in themselves but also in relation to one another are of the most intimate unity, or form one being."[1]

We have here an essentially active soul,[2] but the description almost suggests that Herbart's demolition of the innate faculties is repudiated by his followers; though, in point of fact, Beneke is as much opposed to the doctrine of innate faculties as is Herbart. But these ground-systems are not faculties in the ordinary sense of that term. Rather they are blind tendencies that can rise to actual modes-of-consciousness (to use Professor Stout's phrase) only by appropriating other elements of a different nature. These other elements are called Stimuli (*Reize*), and the mental states that result from the interaction of the ground-systems and the stimuli depend almost as much upon the nature of the stimuli as on that of the systems. In this way the inner nature of the soul is brought into very direct contact with the external world. The developed soul is built up out of traces of experiences of interaction with the external world.[3]

The original soul is therefore fully equipped with active possibilities, and the process of knowledge, according to Beneke, consists in stirring up certain inchoate powers by means of external influences. The internal powers are so created as to be fitted to respond in a particular way to those external stimuli, and the nature of the result depends, to some extent at least, upon the nature of the stimuli supplied. When stimuli and internal power are brought into contact with each other the result is consciousness.

We need not follow the Benekian psychology further. The essential point is that in Beneke, as in Herbart, know-

[1] *Lehrbuch der Psychologie als Wissenschaft* (1861), § 38.

[2] "Die menschliche Seele verhält sich by keinem Processe rein passiv; auch für die Erzeugung der leidendlichsten sinnlichen Empfindungen ist eine Art von *Aktivität* von ihrer Seite nöthig." *Ibid.* § 23 note.

[3] "Für jede sinnliche Thätigkeit der ausgebildeten Seele müssen demnach wesentlich zwei Hauptbestandtheile zusammenwirken: 1) eine neu gebildete sinnliche Empfindung, und 2) die im Inneren der Seele aufbehaltenen gleichartigen Spuren." *Lehrbuch*, § 55.

ledge is the result of the interaction of soul and environment, and that the quality of the environment has something definite to do with the result. The mental content in both cases comes to be of the first importance. The assumed passivity of the Herbartian soul is therefore not an essential part of his system, and may accordingly be dropped altogether out of our consideration in dealing with the place of instruction as an educational process.

While the will—as good or bad—has to bear the responsibility of acting uniformly or erratically in relation to given stimuli, the supply of stimuli is a different matter, and with this the will has, in the first instance at any rate, nothing to do. We may therefore drop the falsely deduced will, and confine ourselves to the application of an ordinary will to the manipulation of the knowledge supplied by the educator.

Accepting the soul, then, as something given, something independent (as to its origin at all events) of the ideas, it is clear that it cannot act upon nothing, and therefore the content, the circle of thought, is of prime importance to the development of psychic activity. What is it then that marks off the Herbartian view of instruction and makes it so much more attractive to teachers than the ordinary view? To begin with not all instruction is recognised as educative by Herbart. The acquiring of knowledge for a living, or for recreation, is excellent in its way, and the person in need of such instruction should go to a teacher and get what help he can, but that is not educative instruction (*erziehender Unterricht*).[1]

"Man's worth consists not in knowing but in willing."[2] Here we have the suggestion of the relation between knowing and willing that we have had to give up. But even if we cannot deduce the will from the circle of thought, there may be a close and important relation between them. It is clear that Herbart lays great store upon the kind of knowledge that is to be communicated to the educand. It is certainly used by him as an organon. His view is not that

[1] *Umriss*, 57. [2] *Umriss*, 58.

of the Disciplinarians. The educand is not to study one thing in order that he may acquire general power; and yet general power of a kind does result. The knowledge is not to be acquired as mere useful matter or amusing matter. What is mastered is to become a permanent part of the educand's equipment, and to that extent Herbart may be said to belong to the school that claims to turn fact into faculty. But Herbart laid a great deal of stress on the nature of the subjects studied, and his followers have spent a good deal of time in classifying the various subjects according to their value as *Gesinnungsstoff*. History, the Humanities, Nature are the staple classes of studies. The facts acquired are not turned into faculty in the sense of leading to skill in any single direction. Their effect is rather upon the whole nature of the educand. But their subject-matter never becomes of no importance in itself. These subjects are not learned in order to leave a general impression.

A certain general effect does follow from the study of the appropriate Gesinnungsstoff, but this general effect is closely related to the nature of the subject-matter. It is known as *interest*.

"The word *interest* indicates in general the sort of intellectual activity which instruction should cause, since it cannot arise from mere knowledge. For one regards mere knowledge as a store which might indeed be lacking without a man being in any way different on that account. On the other hand, he who has a firm grasp of his knowledge, and seeks to extend it, is interested in it."[1]

Herbart makes a very elaborate analysis of the various kinds of interests, but the sum of the whole matter is in the above few lines. Interest is active. It is not the mere pleasure of contemplation or enjoyment. It is an impulse to further effort. Critics sometimes say that Herbartianism leads to a soft pedagogy. It is of course possible that individuals who profess to follow Herbart may fall into this error, but they get no encouragement from their master. In his hands interest passes upwards from being a mere

[1] *Umriss*, § 62.

means to being an end in itself. In the ordinary work of school it is quite common and, within limits, quite legitimate to use interest in one thing to rouse interest in another. But in the Herbartian system, so far from being a mere inducement to attend, it is a force that drives the student on through all manner of drudgery in order that he may gain the end it sets before him. And the end of the whole educative process is to be the cultivation of a many-sided interest. The value of an education is to be estimated by a consideration of the subjects to which the finished educand is sensitive. Your really educated man is one who has something within him that responds to all worthy things. It does not by any means imply that he must have an encyclopaedic knowledge. He may not know in great detail the content of many of the subjects of general interest, but he will know enough about all to be roused to intelligent activity when brought into contact with any of them.

We have in many-sided interest the other aspect of the rounded whole of a finished education that is represented by the idea of self-realisation. The two ideas are not mutually exclusive. The self can be realised only in a rich environment. A full and many-sided interest can be acquired only when the whole nature of the educand has sufficient scope. Herbart is particularly careful to warn the educator against losing the unity of personal consciousness in the pursuit of many-sided interest.[1] But there is no reason why the process of building up a many-sided sensitiveness to interest should result in the disintegration of the self, just as there is no need to starve the self by denying it content while it is seeking to realise itself.

At the present moment the rival schemes have each their supporters. Idealism, basing upon the development of the organism, naturally prefers self-realisation. A large section of the Herbartians fall in with this view on the ground that it can be quite well reconciled with the main Herbartian positions, while bringing to the forefront the

[1] *Umriss*, § 65.

importance of the self, which is supposed to be rather neglected in the Herbartian system. A section of the more strict Herbartians, however, are inclined to fight for many-sided interest. At first sight it might appear that the two ideals represent respectively the subjective and the objective aspects. But this is not really so. Many-sided interest must obviously be regarded as ultimately as subjective as the other, since the interest comes essentially from within. The fact that external elements give a scope for the interest in no way detracts from its subjective character. The only difference is that in the self-realisation ideal the emphasis is laid upon the self as such, in the Interest ideal the self is seen in relation to what it acts upon. In the first case we have a rather empty ideal. This becomes particularly clear when we take the hortatory attitude. Is there any real help in urging the educand to realise himself, or the educator to see that the educand realises himself? With regard to the Interest ideal, on the other hand, there is at once a whole world of material for the educator; a world carefully arranged by Herbart and his followers; too carefully arranged perhaps, but in any case available to every educator. Each one may arrange or rearrange the matter as seems most desirable for the particular educand under consideration. Once we get rid of the idea that the various interests are things that acquire their power from without, there is no longer any fear that the self will be overwhelmed by external forces. It can develop itself with perfect freedom from external restraint so far as the coercive power of external objects is concerned, though of course it is entirely in the hands of a skilful educator who presents the appropriate interests at the suitable time. The educand-self cannot help responding to such interests, but the power that compels comes not from the external interest, not from the educator, but from the educand-self. Its working out of its interest *is* self-realisation.

It may seem at first as if there is no important difference between the two ideals as thus defined. But even apart from the great advantage to the educator of having a

definite means of carrying on his work, there is the further benefit of getting rid of the morbid element of the self. The root idea of self-hood is re-entrant action, the reflection of activity upon its source. There are appropriate occasions on which this reflection should take place; but there is a danger of overdoing the subjective activities. It may be said with some truth that the self best realises itself when it thinks least about it. Self-consciousness in the philosophical sense is undoubtedly man's highest prerogative; but it is very liable to abuse, as its familiar connotation of every-day life clearly proves. In aiding the self-realisation of the educand the educator proceeds more healthily when he avoids an appeal directly to the conscious self. No doubt the educator must keep continually before him the self of the educand, in order that the proper influences may be brought to bear. But this is the educator's burden, and need not be shared by the educand. It is one of the chief advantages of external education that the educand has the benefit of having his self-consciousness stimulated from without in such a way as to save over-stimulation from within. Occasionally it is necessary to call upon the educand to take official stock of himself, but this ought rarely to be done, and should be made an opportunity for vigorous emotional discipline. Nothing is so unhealthy for either child or adult as continual introspection and self-analysis. To set before the educand the deliberate ideal of realising himself does not seem the best way of attaining that ideal. To be sure we can never escape from ourselves—Dich kannst du nicht entfliehen—and we ought not to want to. But by throwing ourselves heartily into whatever we may happen to have in hand we escape from ourselves in the best way, not by neglecting our self, but by giving it proper scope for action. When we are deeply interested in anything we lose all knowledge of self, and are frequently surprised that we have been for so long a time oblivious of ourselves. No bad ideal is set out in the line of the familiar hymn:

"A mind at leisure from itself."

Lack of interest gives rise to tedium, and tedium has been explained as the awareness of the passage of time. This ultimately comes to be an awareness of our self, and a measurement of the passage of time by reference to our own sensations. By manipulating interest, therefore, we acquire the power of regulating the amount of attention to be set free to the consideration of self, and generally speaking this amount should be small.

There is something very alluring to the educator in another suggestion: that the two ideals are complementary to each other, or rather that they represent the same goal reached by different routes. If we are permitted to assume a perfect self to begin with and a perfect system of education, the attractive suggestion might be accepted. But in view of the recognised individuality of the selves involved, there would be obvious danger of restraint if we insisted upon all attaining the same width of interest. To the ultra-practical person the phrase *many-sided interest* provokes the enquiry: "How many sides?" Crude as the enquiry is, it brings to light an inherent difficulty. In search of an answer—even if we only seek to show the absurdity of the question—we are driven back upon a consideration of the relation between the self and its content, and have to admit that ultimately the range of interest must depend to some extent on the nature of the self in question. Obviously there are selves that from the very beginning are unable to extend their interest over so wide a field as others. No doubt it will be argued that many people are limited in their outlook mainly because they have not had the opportunity for the wider range, and it is sometimes naïvely argued that it would be better for people of narrow interests if they were compelled to extend their range. This may be admitted within the possibilities of the individual self. But there is a limit beyond which the attempt to extend the range must result in interference with the self-development of the individual. It goes without saying that the true spirit of self-realisation does not permit of the self being compelled to cover a greater range than it is fitted to do

with success. The first principle of self-realisation is that the possibilities of the self form the determining condition.

For the practical educator there can be no doubt that the safer of the two ideals is self-realisation, if for no other reason than that it obviously must, *ex hypothesi*, fit every individual case. It may be an empty ideal, but its very emptiness tends towards safety. The fact that we do not know precisely what is the best of which the individual self is capable, makes it almost impossible to find fault with the pious opinion that the educator's business is to bring out the best that is in the educand, to enable him to realise himself. On the other hand, the Herbartian ideal recommends itself more to the teacher, who seeks not merely a plan the failure of which it is almost impossible to demonstrate, but rather one that leads to practical guidance regarding what is to be done in the process of education. Self-realisation is a very troublesome ideal for the working schoolmaster. There are so many things that he must not do, and so few things that he may. At a conference of American teachers it was once debated in all seriousness whether under any circumstances boys should be compelled to keep time to the music in marching to their places in school.[1] The question was: Did not such compulsion interfere with the free and full development of the educand-self? That there is room for restraint and opposition in the process of helping the educand-self to realise itself, surely goes without saying. What is the self put into an environment for, but to react upon and against it? All that has been said on the training of the will naturally applies here. Indeed it is at this point that the two ideals come together, and show their interdependence. The educand-self is, to begin with, merely a bundle of possibilities. To bring those possibilities to actualities is the function of education. All the influences of the environment lie open to the educand, but he has not a free choice

[1] For an admirable *reductio ad absurdum* of the self-realisation theory as applied to an ordinary school, see pp. 208-212 of W. C. Bagley's *Craftsmanship in Teaching*.

among them. There are without doubt some that he can avoid, but certain others force themselves upon him whether he will or no. Sometimes it may be the educator's duty to force upon the educand's notice elements that would otherwise escape him, and therefore fail of their proper effect in aiding him in his realisation.

It is worth noting just here that the ideal of self-realisation involves a very optimistic conception of the educational problem. It practically takes it for granted that the given self is worthy of realisation. If he accepts certain views of human nature the educator who has the good of society at heart would twist the necks of a fair proportion of the youngsters who come to him to be aided in their self-realisation. The ideal assumes that while there is the greatest variety in the possibilities implicit in the undeveloped selves that are seeking realisation, there is no *irresistible* tendency to evil in any of them. If we have our choice, we will naturally accept the Helvetian and Holbachian moral neutrality as the most favourable basis for our educational work, but the presence of an evil bias in certain cases need not make the educator give up his self-realisation ideal. What he has to do is to seek to bring out of the given self the best of which it is capable. For here we must distinguish between the two aspects of self-realisation—self-realisation *of* the self and self-realisation *by* the self. No doubt in the ultimate resort the two must be one. All the educator can do is to act upon the self, so that *it* may realise itself in a particular way. The educator cannot *directly* influence self-realisation. It is in view of such considerations that the Herbartian ideal appears in such a favourable light. By bringing the educand-self into relation with appropriate stimuli, it can give just that support to a feeble tendency that is necessary to preserve it, and by withholding other stimuli to starve certain other tendencies. The educator cannot create tendencies, but he can direct them, he can nourish or starve them; which is only another way of saying that he can cultivate a circle of interests. The diameter of the circle may vary greatly,

according to the possibilities of the case. But it is a reasonable ideal to set out with the intention of creating as wide a circle of interests as the educand in question is capable of developing. This certainly shares in the vagueness of the pure self-realisation ideal, it acquires some of that ideal's safety from criticism of results. But on the other hand, it leaves a wide margin of things that the educator can actually do in the way of analysing and applying the various interests of which the individual is capable. No doubt the systematising tendencies of the educator will probably drive him to the invention of a curriculum or several typical curricula that ought to meet the case of the average self, and, after all, while there is infinite variety of detail there is a large measure of sameness in human possibilities. So long as selves have to be trained in batches there must be this dependence on the common basis, yet the educator must be always on the look out for means by which he may aid the individual to develop in the most suitable way. It must not be supposed that individuality is due to the ways in which men differ from each other, and that to be individual one must be odd or eccentric. True individuality depends on comprehensiveness, "degree of appropriation of the universe," and it is his power to assist in this appropriation that justifies the interference of the special educator at all.

The manipulation of the self-consciousness of the educand is one of the most delicate functions of the educator. The educand must take a hand in his own education if the highest results are to be obtained. He must regulate his activities for his own ultimate good. But clearly in the case of the self-educator certain special difficulties arise. The very fact that he wishes to produce a particular effect upon himself may militate against his success. The interference of consciousness has to be taken into account. Accordingly, consciousness must be so manipulated by the educator that the educand becomes accustomed to know and understand himself without being flurried or enervated by continual introspection. A great part of the

educator's business is to conduct his processes so that when he hands over the educand to his own devices, the educand may have the power to carry on the education the educator has begun.

To the ordinary reader who does not follow Herbart, this aim of the educator would very likely be represented by saying that what has to be done is to turn out our educands with a well-trained will. Probably there is less difference of opinion on the point of the need for the training of the will than on any other single issue in education. But while we are all agreed on the fundamental importance of training the will, we are greatly divided as to the methods to be followed. We have been unable to concede that Herbart has been successful in deducing the will from the individual elements of experience. But it does not follow that the conceptions that we have got from him may not be of value in the work of education. We find that he practically identifies will and character. "That part of his will that he finds to be already present we call the objective part of character."[1] We are therefore entitled to transfer to will the two terms he applies to character, the objective and the subjective. The distinction is important, as it emphasises the fact that the will begins before we are conscious of it as will. Before we are interested in the matter, there is a part of our will already made. Of course it is open to any one to maintain that Herbart's objective will is really innate, that it was given at birth, and the subjective will must make the best of it. But observation shows us that there is very real training of some kind of will before the subjective will makes its appearance. In fact, the radical blunder of all training is that it is postponed too long. Those who pass for authorities on education are familiar with the experience of having a notorious case of stubbornness brought before them with the request for a remedy. The answer should be in every instance that the case has gone too far for anything but palliatives. The remedy should have taken the form of prevention, and should

[1] *Umriss*, § 143.

have been applied at the earliest stages. We must get it clearly into our minds that even the most truculent persons whose wills have been allowed to grow up without training really have a certain power of self-control. Further, we are not to confound, as so many educators do, a strong will with an unregulated one. With regard to energy, wills are strong and weak at birth and will remain, relatively to each other and apart from training, strong and weak to the end, just as two memories, one good and one bad, will remain in relation to one another permanently good and bad, though the bad one may by training become more effective than the originally good one if the good one remains quite untrained. As with the memory, so with the will. It can be trained only by exercising it on appropriate material. In spite of the educator, the will of the young child will be exercised: the only hope is in selecting the proper occasions for exercise and in regulating the results.

It is a mistake to think that the will can be trained either by sheer force of opposition or by always giving way. In fact, these two processes are the cause of more bad will-training than anything else in human experience. To "break the will" means practically to annihilate the will, to cause it to give up acting on its own initiative, that is, to cause it to cease to be a will. John Wesley was no doubt right from his standpoint in insisting upon the breaking of a child's will, if the child were to have any chance of salvation. What is here meant is the breaking of what is usually called self-will—which amounts after all to nothing more than the devotion of the will to ends which are not selfish. In other words, the breaking is to hold only in a certain relation. In order that the will may have any value to the God for whom it is broken, it would require to retain its essential qualities in the ordinary relations of life. The educand must not address the educator in the words of the hymn: "Take my will and make it thine." He needs it for his own use. The educator no doubt is very anxious that the educand should will certain things, but he knows

that the willing must be done by the educand himself. Willing cannot be done by proxy.

On the other hand, there is as much danger in the other extreme. If the candidate is coaxed to do certain things by means of various attractions his will is again being tampered with. His independence is just as much assaulted as in the case of the application of superior force. A will that is led by extrinsic attraction to follow a particular line of action is being weakened in the process. It is trained to expect that there will always be a pleasant consequence as a result of following the initiative of another.

In the training of the will there must be both constraint and freedom, both pleasure and discomfort. But everything must be natural: there must be a real connection between the nature of the thing willed and the result of willing it. The educand must learn that certain things lie out of his range altogether, and that he cannot will them. This he learns very rapidly at the earliest stages. Then he discovers that there are certain things that he can will, but that turn out disastrously for himself, certain others that he can will and are followed by satisfactory consequences. The training of the will, then, consists in the systematic practice of applying experience to varying conditions. Gradually the educand begins to generalise about the invariableness of certain reactions, and so far as the unvarying cases go he very rapidly accustoms his will to decide for what his educator regards as the right. It goes without saying that by this use of satisfactory and unsatisfactory results we are not committing ourselves to any utilitarian scheme. The nature of what causes the satisfaction and the dissatisfaction introduces other considerations, and the educator is expected, in guiding the ordinary experience of the educand and in supplying factitious cases, to train the educand in his estimates of what are and are not worthy objects, that pain in one cause is better than pleasure in another. The important point is that the will shall be accustomed to reasonable opposition

and reasonable encouragement, all arising out of actual experience.

This training must begin at the earliest possible moment. In fact, on the physical side it is begun immediately after birth. Its most important work must be done before the appearance of the subjective will. By the time this appears on the scene it should find at least a good-going will-mechanism that forms not only excellent material for practice, but that readily supplies a model. The training of course does not cease on the appearance of the subjective will, but its nature changes. There must be a new appeal. It is the educator's business to do all he can to maintain the uniformity of his own reactions and the reactions of others, so far as he has them under control, so that the practice in rational opposition and encouragement may continue.

It is very seldom that the training of the will has the advantage of beginning at this early stage, and advancing in this regular way. Almost invariably the writers on the subject spend most of their time in showing how *repairs* can be executed, instead of showing how a good will can be obtained from the first. Take, for example, that admirable work by Jules Payot, *L'Éducation de la Volonté*. Here the author's practical object is to do what he can to help students to overcome some of the commoner weaknesses of the will. He writes optimistically, but the reader cannot avoid the impression that he is in the repairing section all the while, instead of in the making section. Payot puts in a great claim for *time* in his reparatory works, and very rightly so. All that he says on the subject is admirable, but for the educator the reflection must occur that a claim for time ought to be put in at an earlier stage. Naturally Payot has to work with the subjective will all the time. A preliminary training of the objective will would make a world of difference to the possibilities of the case.

In this practical problem of the training of the will we have felt the need of two apparently antagonistic theories. They are found, however, to be able to work together, and indeed are dependent on each other to form a working

scheme. With the synthesis of the idealistic and the mechanical points of view represented by combination of the interdependent ideals of self-realisation and many-sided interest, we attain to a rest-beat in the educational rhythm. We can be at peace for a little while with regard to the ultimate goal of education. As to methods of attaining our ends, we are just entering upon what promises to be a prolonged and very energetic beat. We have already claimed, on the strength of our overgrown educational literature and the world-wide extension of popular or national education, that we are living in one of the great maximal educational periods in the history of the world. The claim may be supported by the very important fact that education is just entering on the scientific stage. In spite of Alexander Bain's *Education as a Science*, and the increasing tendency of those engaged on the subject to claim scientific rank, it is only quite recently that the subject has entered on that stage at which it may confidently claim a place among the sciences. When Dr. Paul Monroe,[1] Compayré and others write and speak of the Scientific Tendency in Education they treat the matter from the point of view of science studies as part of the curriculum. In order that the study of Education should itself become scientific it must possess the necessary and sufficient mark of a science. This may be said to be the possession of an objective standard. Light and sound, for example, were studied for long at the wonder stage, and even at the utilitarian stage, but they did not become sciences till their students were able to test their subjective impressions by reference to some common external standard. The science of light has been said to be born on the day that Sir Isaac Newton discovered refrangibility and the constant behaviour of the colours of the spectrum. We may enjoy sound and use sound in a great variety of ways; we may know a vast number of things about sound: but till we have some such external standard as wave-lengths, we do not have any real science of sound. The early theorists in

[1] *Text-book in the History of Education*, pp. 677-705.

education knew a great many educational facts which they could use quite skilfully. They philosophised about education; as we have seen, they were far from being mere empirics: in constructing their theories they sometimes worked inductively, sometimes deductively; they could give many reasons for the faith that was in them. But they had no objective standard. It was all a matter of individual impression and opinion. Experience counted for much, no doubt, and observation. Many facts could be adduced in support of theories set forth; but there was no common agreement about the facts. There was no standard by which all were prepared to have their facts tested. The recent introduction of quantitative methods into education is the beginning of a process that will no doubt result in a satisfactory objective standard for the study. The newer method began in the ancillary study of psychology, that itself only came to an objective standard in the work of Weber, Fechner, and the other psycho-physicists. At first their standard was of very doubtful validity, and even yet is far from being what psychologists would like. But the quantitative method gives a new point of view, and is going to be the method of the future.[1] The use in schools of certain of the instruments of experimental psychology, such as the ergograph, the aesthesiometer, the tachistoscope, suggests to the educational theorist that he too may set up an objective standard. It is true that doubts are already being cast upon the general application of ergographic results—something like the doctrine of transference is implied in some of the present applications—and the cautious educational theorist is disinclined to commit himself wholly to the verdicts of brass instruments. But what is now called experimental pedagogy is not by any means confined to instrumental work. Its essence consists in isolating elements of problems, estimating them in numerical terms, and thus getting results that may be compared

[1] "The psychological text-books of the next century will be as full of formulas as the text-books of physics are to-day." E. B. Titchener: *A Text-book of Psychology*, p. 223.

with those obtained under corresponding conditions. The investigator is thus enabled to have his conclusions tested. It is therefore possible to set problems and get results that can demand recognition, if on careful repetition by several observers they are found to stand the test. We have, in other words, the possibility of an objective standard. It has to be frankly admitted that we are still at a very rudimentary stage. The difficulty of getting an exact reproduction of the same conditions in matters involving all the complications of the personal equation is so great that it is not surprising that many pedagogical investigations have produced contradictory results. All this is to be expected at the early stages of scientific investigation. Yet it may well be that in certain directions we may never be able to make progress by scientific methods. The individual consciousness in the ultimate resort may defy all the instruments and methods of the scientific investigator. Even then it will not follow that the study of education is not carried on at a scientific level. After all, the sort of results that are necessary are those that stand the test of actual experience, that are true within the limits set by the investigator. As in all sciences dealing with human beings, it will be found impossible by scientific methods to obtain complete and accurate results in the case of the individual, but quite possible to get results that are thoroughly reliable when applied by averages. At the present moment there is a very depressing array of questions that the educator would like answered, but that no one has yet succeeded in answering. Future investigations will without doubt answer many of these. In next chapter will be found certain illustrations of the sort of practical help that the educator may expect to receive from the future scientific study of his subject. With regard to those problems that cannot be solved because their conditions are determined by the unique combination of the elements in the educand here and now before him, the educator should take comfort from the fact that it is the need for an intelligent mediator between theory and practice that justifies the high claims

made for the status of the educator. It is because in the last resort high capacity is required to make general theory fit a particular case, that the practical educator is entitled to the honour that the truly wise will always accord him.

CHAPTER XII

THE EDUCATIONAL OUTLOOK

When we try to forecast the further development of educational theory and its effects on educational practice, our attention is naturally given in the first place to the human material upon which the educator has to work. No doubt the educand will always remain one of the ultimate data of education. The educator as such cannot get behind the material supplied to him: he must take it as it comes. But while Eugenics is not, properly speaking, a branch of education, it will be readily admitted that it cannot be excluded from any consideration of educational problems that seeks to include future developments. The very existence of a study of that name, rudimentary and unsatisfactory as it is, gives proof that the human race has reached a point at which it has definitely proposed to take itself in hand, and do its best to further its own development by deliberate and self-conscious effort. Admittedly there is nothing new in the idea itself. We have found it fully developed, as far as theory goes, in the writings of Plato, and to some extent at least applied in the life of the Greek states. With the remarkable development of biological science, however, the whole position has changed, and it is just possible that the eugenists of the future may be able to apply well-established principles, where their predecessors stumbled along by mere guesswork. The result may be a steady and rapid improvement in the quality of the educator's raw material.

The question of the possible increase in human capacity

is always interesting, but is usually approached in a pessimistic spirit. Condorcet's[1] tenth period is very generally ridiculed by practical persons. It is true that so far as the improvement of individuals is concerned we have, during the more than a century that has intervened since he wrote, seen little to justify his optimism, except perhaps the trifle that the hygienists and the doctors have been able to do for us. We are still invited to say whether we have advanced on Plato and Aristotle and Pericles. But in his prophecy of the destruction of the inequalities between nations and classes, history has been kinder; for, in the sense in which he obviously meant his words, they have practically been fulfilled so far as could be expected in the time, and the process is going on before our eyes. This change, and the very marked advance in material conditions, cannot be without their effect on humanity. We cannot have the proletariat of to-day enjoying privileges that were beyond the reach of kings in Condorcet's time, without some effect at least on the mental attitude, if not on the mental fibre. It is generally believed that though since Plato there has been an enormous increase in the acquisitions of the human race, there is no evidence of any increase of capacity. It would appear that all the educator can hope for is by proper selection to get human capacity at its best, and to eliminate those elements that interfere with free development, in the hope that in this way he may realise the full possibilities of human nature submitted to him as a mere datum.

We have already seen[2] that the breakdown of the popular theory of the transmission by heredity of the characteristics acquired during the lifetime of the individual, necessitates the surrender of the educator's claim to improve capacity by the cumulative effect of education from generation to generation. But even though the new theory denies to the educator the power of improving

[1] See his *Esquisse d'un Tableau Historique des Progrès de l'Esprit Humain* (1794).

[2] See p. 55.

capacity it does not follow that capacity cannot be improved. For admittedly there has been development of human capacity in the past, else the whole scheme of evolution must be abandoned.[1] A process of this kind once started goes on, unless there is some reason why it should cease. In this case no such reason has been suggested. The assertion has certainly been made that there has been no increase in capacity since a certain illustrious group of men set a standard, and the assertion has been very generally accepted as true. But there are some optimists who, while not questioning the popular view, yet hope for better things:

"While capacity has increased during all past time, we cannot trace its increase during historic past time; this does not discourage the thought of the increase in future time, for the simple reason that in historic time no conscious effort has been made to increase man's capacity, and conscious effort works wonders in comparatively short intervals."[2]

Here "all past time" must include "historic past time"; so there is an implication of the presence of increase of capacity during the historic period though it cannot be traced. The balance of probability would seem to be in favour of an increase during the historic period.

To be sure it is open to those who argue that human capacity did culminate in the Fifth Century B.C., and that since then there has been either stagnation or decay, to support their position by the favourite parallel between the individual and the race. Usually employed to throw light upon the life of the individual which is "writ large" in the race and may therefore be more easily read in the history of the race, there is no reason why the figure should not be used in the opposite direction. In fact one of the chief difficulties of the parallel—not usually brought out,[3] though it was observed and noted as a difficulty as far back as the time of Augustine—is thus exposed.

[1] Though it has to be noted that certain German anthropologists are now advocating this abandonment.

[2] H. H. Horne: *Idealism in Education*, p. 150.

[3] Huxley clearly suggests it in his Romanes Lecture of 1893.

Man flourishes, culminates—and decays. It may be that the race has passed its prime, and that all those wonderful achievements of which we of the Twentieth Century are so proud, are merely the mad maunderings of racial senile decay.

It seems more in accord with what we find in other departments of nature to assume that there has been progress in mental capacity during the past 2400 years, but that our means of testing the matter are insufficient, particularly in view of the fact that since the time is relatively so short, the increase in capacity is likely to be very small.

The first step towards manipulating capacity is to understand it. Here it is that the exact methods now being introduced will find their place. We noticed in dealing with Idealism the methods of testing for general intelligence. But the laboratories are not likely to remain content with the somewhat vague results of Binet and his school. The *naturel* of the educand is at present being carefully analysed by quantitative methods, and many possible ways of standardising results are being considered. In the future the educator will no longer have to depend upon a mere general impression of the elements that form the *naturel* of the educand. A standardised system of coefficients will be arranged, so that every important quality may be tested and recorded. At present, in the more progressive schools, each pupil is provided with a card on which are recorded all his physical characteristics so far as these are expressible in quantitative terms. In the future, the range of these cards will be greatly extended. It is already recognised that the ergograph supplies an objective standard of general power of work. Further, the ergographic curve of an individual is found to be constant for that individual under similar conditions. Accordingly the ergographic curve will find an important place in the future personal card of the educand. By its help the educator will be enabled to avoid many of the blunders we at present make in appraising the work of the educands. What might be an excellent piece of work

from a boy with one kind of ergographic curve, may be discreditable from a boy with another kind.[1] The personal card will also contain a note of the educand's reaction time, his preferred sense, the form of attention (distributed or focussed) that characterises him, and the kind of memory. Various items will be represented by a printed word on the card, and all the laboratory recorder will have to do will be to add the appropriate figure by way of coefficient. For example, there will be a coefficient of mere brute memory, of verbal memory, of associative memory. Further, there will be coefficients of visualising power, colour discrimination, pitch, and tone and time. The feelings and the will itself are eligible for this coefficient treatment when science has sufficiently advanced. It goes without saying that there are many dangers connected with this method of getting at the possibilities of individual educands. But we may rely upon the educators of the future to foresee and provide against these.

[1] For an excellent account of the working of the ergograph, and the use to be made of the resulting curves, see Henri and Binet's *La Fatigue Intellectuelle*, chap. vi. The reader cannot fail to see how direct the application of the laboratory results can be made to the business of the educator. The work of Karl Pearson, C. Spearman, C. S. Myers, E. L. Thorndike, and E. B. Titchener can all be used as a guide in the preparation of the personal card; and Dr. William Brown has just published *The Essentials of Mental Measurement*, that not only brings the discussion up to date, but incorporates a great deal of original work of the greatest value to educators who have a sufficient mathematical equipment. The important point in all this measurement is the establishment of an objective standard where hitherto we have had to depend on more or less subjective impressions. Many of the measurements, too, have the great advantage that they prevent pretence on the part of the subject. The ergographic curve, for example, can lie in only one direction. The subject can pretend to be weaker than he really is, he cannot pretend to be stronger. The value of this fact will be very evident when the ergographic curve comes to be demanded as part of a man's credentials when he is applying for work. In school tests the youngsters are far too eager to show how strong they are to be far-seeing enough to record a false standard for their future comfort. By and by, no doubt, the slippery educand will find it to his advantage to be cautious in his dealings with the ergograph, and the psychologists must then invent certain "controls."

The question, for example, of whether the educand should be shown his personal card will almost certainly be settled in favour of treating it as the private property of the educator, with a recognition of the right of the parent to participate in the knowledge under certain reasonable conditions. This matter, however, suggests only one aspect of the very wide question that waits for the decision of the future educator—the problem of the exact stage at which the educand may be invited to take a deliberate share in his own education. For in the future as in the past there will be the inevitable rearrangement of the educational poles, and the problem for the educator will be whether this readjustment should be allowed to take place in all cases naturally and without his interference, or whether in certain cases it may be advantageous to intervene and seek to accelerate the process. The general opinion at this moment among educators and laymen alike is certainly in favour of letting matters take their natural course. There is a not unjustifiable feeling of danger in recognising too early and too prominently the self-consciousness of the educand, and we may take it for granted that our successors will be very careful in the manipulation of their special knowledge of the qualities of those placed under them.

The personal card will of course be subject to periodical revision, in order to record changes, and to avoid the ever-present danger of errors. Besides, there is no greater fallacy than that of classification. To class a boy in a particular way and then to treat him ever after as necessarily belonging to the class selected, is a source of serious educational danger. The educator must be always ready to revise his decisions on the qualities of his educands. But in the case of numerical coefficients based upon objective standards there is less than usual danger of the fallacy of classification, and any changes that do take place have ordinarily a definite meaning, and actually give information that is of practical importance to the educator.

The use to be made of these cards will have to be regulated by principles that have yet to be determined, for many

new problems will emerge as the result of the new kind of knowledge supplied by these quantitative classifications. At present, for example, there is a very practical problem before the teacher: should a pupil who is poorly qualified for a particular subject be excused from that subject altogether, because he only wastes the time he devotes to it, or should he be made to study that subject with special care in order that he may be brought up to a high level of general all-round efficiency? There can be little doubt that in the future pupils will not be called upon to spend time over subjects for which they have no aptitude. A distinction will of course be drawn between disinclination for a study and inability to pursue it. As it is probable that future investigations will confirm the belief now gaining ground that there is no hope of increasing within the life of the individual any of the powers for which coefficients may be found, education may consist more and more in finding out the things that the educand can do well, and providing opportunities for him to do them.

There is here the suggestion of a very important change in the incidence of the educator's efforts. He will no longer receive a class of pupils and do his best to make them as uniform as possible. Classification will remain as important as ever, since it will stand to the educator in the same relation as diagnosis stands to the doctor. A mistake in classification is bad at any time, but it becomes of vital moment when the whole future of the educand is to depend on the early classification.[1] The function of classification will be completely changed. It will not be merely a process of arranging the best way of fitting in every individual to the conditions of the school life, but the discovery of the educand's qualities in order that the educator may make the best use of the educand's *naturel* while at school, and may make the best recommendation for his life work when he leaves it. Even at the present moment, and under our rigid conditions as to curricula,

[1] "L'éducateur n'a pas le droit de se tromper." Ch. Ribéry: *Des Caractères*, p. 194.

the teacher is often appealed to for advice regarding the best line of work for the pupil's future. But in point of fact the teacher has very little opportunity of learning what the pupil is fit for in other than scholastic subjects. Under the newer conditions he will become practically a specialist in diagnosing the best kind of life work for individual pupils.

This does not mean that all schools are to become vocational.[1] Indeed this newer view rather marks off the teacher as essentially a pre-vocational trainer. He has to find out the possibilities of the educand and give a training that will have a bias in favour of the future life work for which the educand is specially fitted. What is at present being attempted by certain vocational bureaux will in the future be done in collaboration with the schools. On the one hand the teacher cannot be expected to know the detailed requirements of all the different vocations. This information must be supplied by special officers whose business it is to keep in touch with the actual employers of labour. But on the other hand under the newer conditions, and with the help of the coefficient system, the teachers will be in a position to find authoritative answers to questions that are at present set in a very vague way and answered in a way that is still less satisfactory.

In a vocational bureau at present, for example, the candidate for advice in the choice of a life work is asked certain questions so that the adviser may discover what sort of

[1] Ruskin sees the difficulty of getting the right sort of boy allocated to particular trades, and in his own airy way explains that there is no great difficulty in finding out and manipulating the available human energy :

"It is easily enough discovered. To wish to employ it is to discover it. All you need is a School of Trial in every important town, in which those farmers' lads, whom their masters can never keep out of mischief, and those stupid tailors' 'prentices, who are always putting the sleeves in the wrong way, may have a trial at this other trade." *A Joy for Ever*, § 22. Further on, in § 28, he calls them "Searching or Discovering Schools," and though he makes no real use of the idea, it may be worth the attention of those with greater practical skill.

boy he is. But what kind of answers can be expected from a raw boy to such questions as the following?

Are you a good listener?

Do you talk a good deal about yourself?

Mention the limitations and defects in yourself.

If you could get any six things you wished for, what would those six things be?

No doubt a skilful psychologist of long and specialised experience could make a good deal out of sets of replies to such *questionnaires*. But he would have to work by a process of interpretation by contraries, and of making all manner of allowances. The ordinary vocational adviser could make nothing at all out of the answers, unless he knew the character of the boy, which is precisely what the questions are intended to elicit. The objective standards to be introduced into the schools will get rid of the present uncertainty, and enable the vocational adviser to know with a fair degree of accuracy the limits within which the candidate is free to make his choice.[1]

Professor Hugo Münsterberg in his *Problems of To-day* gives some excellent illustrations of the advantage that would accrue from a definite knowledge of the elements of the mental equipment of candidates for different occupations:

"There are mills in which everything depends on the ability of the working man to watch at the same time a large number of moving shuttles, and to react quickly on a disturbance to

[1] Educational psychologists will watch with very great interest the working of the system of Rhodes Scholarships at Oxford. At present the combination of physical, social, and intellectual qualities that are considered essential for the candidate to obtain full advantage from the scholarships is tested in a more or less unsystematic way. Even under those conditions the record, if carefully kept for half-a-century, cannot fail to be of practical value: though, before fifty years have passed, it is more than likely that a much more accurate system of testing will be applied all over. There is at present a movement on foot to establish a Royal Commission to enquire into the best ways of testing the fitness of candidates to enter upon certain official and professional careers. See Mr. P. J. Hartog's article on *Examinations* in the *Journal of the Royal Society of Arts* (London) for Feb. 3, 1911.

any one. The most industrious workman will be unsuccessful at such work if his attention is of the type that prevents him from such expansion of mental watchfulness. The same man might be most excellent as a worker in the next mill, where the work demanded was dependent upon strong concentration of attention on one point. There he would surpass his competitors, just because he lacked expanded attention and had the focussing type."[1]

When facts of this kind are placed before practical business men they have a way of assuring us that there is no need for such refinement. Men, they tell us, have a convenient way of settling down into those particular parts of the work of a large factory that happen to suit their peculiarities. Now within limits there is truth in this, though it is remarkable how long it was before the radical defect of colour-blindness forced itself upon the attention of practical men. Speaking generally, men break down conspicuously in work for which they are totally unfitted. But how many can carry on for a lifetime a particular kind of work for which they are unsuited without actually breaking down, and yet paying for their ignorance of this unsuitability by a strain that would have been absent in some other and apparently not much different work? A particular degree of astigmatism may make certain kinds of work irksome and debilitating. The workman may suffer from headaches that he attributes to work in general, but that are the direct result of his particular kind of work, and would disappear if the workman could change his occupation. The kind of memory in which a candidate is strongest, his preferred sense, his reaction time, all have an important bearing on the kind of work for which he is fitted. What is being done at present in the Vocational Bureau at Boston,[2] and in corresponding bureaux being

[1] *Op. cit.* p. 35.

[2] For an account of the work at present being done at Boston and elsewhere see the little Riverside Educational Monograph by Meyer Bloomfield on *The Vocational Guidance of Youth*, and the handbooks on the various occupations. For some indication of what is being done in Great Britain see Mrs. M. Ogilvie Gordon's *A Handbook of Employ-*

established elsewhere, is resulting in a body of practical information regarding the various trades and occupations that cannot fail to be of the utmost service to the world. Its importance lies in the fact that it not only differentiates between various occupations in which high personal qualifications are essential, but between occupations that at first sight would appear to be practically the same, since they demand little beyond manual labour. One would think that no special information would be required about a candidate for mere hodwork, beyond a general knowledge of his power to lift certain weights, and to do his lifting regularly and honestly. There could hardly be any simpler or less differentiated work than the handling of pig-iron. It is:

"perhaps the crudest and most elementary form of labour which is performed by man. The work is done by men with no other implements than their hands. The pig-iron handler stoops down, picks up a pig weighing about ninety-two pounds, walks for a few feet or yards, and then drops it on the ground or upon a pile. The work is so crude and elementary in its nature that the writer firmly believes that it would be possible to train an intelligent gorilla so as to be a more efficient pig-iron handler than any man could be."[1]

Yet when the writer quoted, an experienced and specially successful employer of labour, went into the matter in his own works, he found that only one man in eight of those actually engaged in pig-iron handling was really suited for this kind of work. Nor does this mean that the seven men were weak in body as compared with the eighth, or were intellectually his inferiors, but merely that they did not fit in to this kind of work.

"The selection of the man, then, does not involve the finding of some extraordinary individual, but merely the picking out from

ments specially prepared for the use of boys and girls on entering the trades, industries, and professions (1908), and *Juvenile Employment Bureaux* (1911).

[1] This and the following quotations are taken from an article by Frederick W. Taylor on *The Principles of Scientific Management* in *The World's Work* for May, 1911.

among very ordinary men the few who are especially suited to this type of work . . . we had not the slightest difficulty in getting all the men who were needed, some of them from inside of the works and others from the neighbouring country."

There hardly seems to be an educational question involved. What has education to do with this gorilla work of pig-iron handling? Yet the whole point of the article quoted is to show that at present pig-iron handling is badly done because the men who are engaged in the work do not know enough to make the best use of their strength. The work demands so much science that

"it is impossible for the man who is best suited to this type of work to understand the principles of this science, or even to work in accordance with these principles, without the aid of a man better educated than he is."

A man has to be selected who has sufficient strength to do the work, and sufficient intelligence to understand an explanation or at any rate to act upon one. He must not have too much intelligence, for in that case he would not consent to remain at this kind of work. Next, he must have a certain amount of ambition, but again not too much: just enough to make him want to increase his wages by the more efficient discharge of this low class of work. Having secured a man of this type, the employer sets an intelligent overseer to train him. This overseer has made all the necessary calculations and experiments as to the alternation of rest and work, times of taking refreshment, mode of lifting and depositing the iron. For several days this overseer supervises the pig-iron handler's every movement, and regulates in the greatest detail, by the aid of a watch, every work-period and rest-period throughout the day. Soon the learner acquires the art of doing the thing in the minutest detail, exactly as he has been instructed, and is able to carry on the work on his own account in such a way as to increase his effectiveness nearly fourfold. Under present normal conditions, he handles $12\frac{1}{2}$ tons per day as a non-trained handler; when he has profited by the directions of the supervisor he can handle

47 tons a day. An important point to be noticed is that under pressure of the offer of a much enhanced income from piecework, non-trained handlers greatly increase their original output, but they cannot reach the 47 tons at all, and they usually injure themselves by their unintelligent increase of effort, and fall back upon their limited output. The trained handlers on the contrary are able to keep up the 47 tons rate without any overstrain.

All this clearly reduces the educand in this limited course of training to a mere instrument. He is called upon to place his powers at the disposal of another in order that these powers may produce the maximum effect. Left to himself and free from all restraining economic influences, the workman doing things in his own way might reach a maximum of say twenty-five tons a day, or with considerable danger of overstrain that would ultimately ruin his working capacity, he might attain to something over thirty. Self-realisation in this case would seem to be purchasable only at the price of being content with half the production of which the man would be capable if he gave himself up to the domination of another, and worked through that other's brain. But after all the workman who is thus producing under the direction of another his maximum amount of work consistent with perfect health, is gaining by means of his higher wages a greater amount of freedom in which to exercise whatever individuality he possesses. We must not confound economic ideals with educational. It is enough for education that it enables the man to produce the maximum amount of result for a given outlay of energy. Whether he moves $12\frac{1}{2}$ or 47 tons per day is educationally of no consequence. Being enabled by education to take the most out of himself that can be safely taken, the educand is at liberty to determine how much of his time is to be devoted to the mere brute work of earning a living, and how much is to be devoted to what even a pig-iron handler may regard as self-realisation.[1]

[1] It is worth noting that in all his schemes Mr. Taylor has taken full account of the difficulties that will occur to every reader familiar

The trend of educational theory is certainly in the direction of giving a bias towards the future life work of the educand, with perhaps a distinct development at a later stage into the purely vocational. It must be the work of the educator to discover at least the best sort of life for the particular *naturel* of each of his educands. There is here no conflict between society and the individual. Whatever work is best suited to the *naturel* of the individual will be that in which, with the minimum amount of discomfort to himself, he will be able to meet all the demands of the society to which he belongs. May it not reasonably be maintained that only in so far as his life's work is determined by his personal qualities can the individual be said truly to realise himself? Social conditions naturally cause complications. A man who could realise himself best as locksmith may have to become King of France, and no amount of skilful determination of co-efficients can help his case. Relief must be sought in a different direction. No doubt in the future, social arrangements will become more elastic, and specific education will have more and more scope. We are not here directly concerned with politics and socialism, yet it is clear that education must be carried on within some political system or other, and to that extent we must take political conditions into account. But whatever the system, aristocratic or democratic, education must always stand for individual self-realisation. So long as it is not manipulated as a mere instrument in the hands of a potentate or a party, education will always have a bias towards individual freedom, in the sense of allowing the individual to follow the lines of his own development.

In his book with the disappointingly misleading title,

with the conditions under which labour is carried on. Mr. Taylor knows all about "soldiering" on the one hand, and on the other all about the insidious methods by which the employer uses piecework as a test of real productive power to the undoing of his employees. He has apparently been able to satisfy the workmen of his good faith, and to secure that increased effectiveness results in increased permanent gain for the worker.

The Future of our Educational Institutions, Friedrich Nietzsche gives most of his space to a diatribe against the specialism of the German education of his day.[1] He rightly maintains that there is no culture in the minute research so necessary in the development of science and philology: but his way of meeting the difficulty is the old one of turning back the hands of the clock. Like Xenophon and Aristophanes he raises his voice in the wilderness, and cries for the restoration of something that has passed away for ever. "Nature brings not back the Mastodon." The future of our educational institutions appears to Nietzsche to be the establishment of a select institution where a few chosen minds may be gathered together so that they may attain to culture and to culture only. What condemns this college is not that it stands for culture, but for culture only. Bacon's college in the *New Atlantis*, Milton's ideal school, Plato's training of the philosopher-kings all stood for culture; but they did not stand aloof from everything else. No doubt if Nietzsche could have gathered together his group of supermen they would have realised themselves to some extent in their isolation, for they would have been chosen on the lines along which the Nietzschean education would advance, and they would have been chosen because they were the sort of men who could best realise themselves in that particular way. To be sure there would be an unusually large number of unsuitables, since Nietzsche had no such principles to guide him in his selection as will certainly be available for the future educator. But even those who were successfully chosen as supermen

[1] "It is a general fact that, owing to the present frantic exploitation of the scholar in the service of his science, his *education* becomes every day more accidental and uncertain.... Thus a specialist in science gets to resemble nothing so much as a factory workman who spends his whole life in turning out one particular screw or handle on a certain instrument or machine, at which occupation he acquires the most consummate skill.... For centuries it has been an understood thing that one alluded to scholars alone when one spoke of cultured men; but experience tells us that it would be difficult to find any necessary relation between the two classes to-day." *Op. cit.* First Lecture, p. 39.

would fall short of the highest attainment, merely because they were out of touch with the world that Nietzsche would call upon them to instruct. True progress does not result from the reaction between a few supermen and a crowd of inferiors.

"Progress is
The law of life, man is not Man as yet,
Nor shall I deem his object served, his end
Attained, his genuine strength put fairly forth,
While only here and there a star dispels
The darkness, here and there a towering mind
O'erlooks its prostrate fellows: when the host
Is out at once to the despair of night,
When all mankind alike is perfected,
Equal in full-blown powers—then, not till then,
I say, begins man's general infancy."[1]

Just as the successful practical man needs a tincture of the Nietzschean culture in order to be a complete man, so do those isolated supermen need a touch of the practical to give them a firm foothold among the actualities about which they are to philosophise.

The education of the future will not neglect preparation for the leisure of life. Attempts have been made again and again to show that there is culture in actual labour. American writers are very keen on this subject. But in spite of all their efforts, and after the forlorn hope of one of them who endeavours to idealise the cleaning of "a pile of soiled and crumpled linen—a most forbidding prospect"[2] it must be admitted that culture cannot be found in mere undiluted labour. It is to the concomitants of labour that we must look for culture material. If "it was the shepherds on the Judean hills that evolved the highest conception of existence and of God that has ever been announced," it was done, and we quote from the leader of the laundry forlorn hope just referred to, "all as they watched their flocks under the starry skies and wondered

[1] Browning: *Paracelsus.*

[2] E. Davenport: *Education for Efficiency*, p. 93.

at the mystery of life; all in the leisure moments of their needful employment."[1] If the newer method of determining individual capacities can succeed in getting all the round men into the round holes and the square men into the square, there will be enough leisure to spare to enable all the workers to have opportunities of culture apart from the mere labour that is essential to their livelihood, and to the good of the society in which they live.

While it has to be admitted that mere labour as labour has no culture value it is not at all necessary to concede that there is no culture value to be found in certain aspects of labour. It is only when the devotee of scientific research loses himself in the more or less mechanical details of his work that it ceases to be cultural. It surely goes without saying that an atomic theory is as cultural in the hands of Dalton as in those of Lucretius. But that there is culture in other than purely literary or artistic work is coming to be gradually recognised. The engineer and the skilled craftsman generally are now recognised to be not altogether empty of culture, even if they make no great display of book lore. One probable result of educational developments in the near future will be the increase of an important non-reading (or perhaps more accurately *little-reading*), but not on that account non-intellectual class. The class at present exists, but because of the bookish tradition it has not yet come to its own in the public regard. When men of this type have been described in books the critics have dismissed them with ignominy as "glorified plumbers." For, after all, critics are not themselves "men of their hands" and have not been trained to respect those who are. There must be a rearrangement of values. People whose coefficients condemn them to a literary life must learn to value the work of those who are called upon for work demanding a use of the hands. In the future, there will probably be more co-operation among the different classes in this way. The mere matter of dirt and messiness is not important in keeping people apart, as is

[1] E. Davenport: *Education for Efficiency*, p. 92.

shown by the freedom of intercourse between sculptors and people who do not usually need to wear overalls; and the same is markedly true in the case of well-educated young engineers who are learning the practical side of their profession by actual work in the shops. If society is becoming increasingly willing to accept the mechanical class of workers as men of good social standing, the difficulty is even less marked in the case of some of the other unbookish ways of making a living. People are not so unwilling to grant that a shepherd, a sailor of the old school, or a farmer may be cultured, as to make the same concession in the case of the purely mechanic arts. It cannot be questioned that the old idea of humanity lingers in the popular mind, and explains the distinction. A man who mechanically manipulates dead matter in however ingenious a way, is by that very fact cut off from the direct human sympathy that is roused by occupations that imply something connected with life. The education of the future will certainly have the effect of bridging over this gulf between the mechanical and the organic.

Beginning as a practical corollary of the protestant claim to the right of private judgment, the movement for popular education has been strengthened by all the democratic advances that were made at and since the French Revolution. The kind of education then given in the common schools was from the first specific. The purpose was to prepare the educand for his religious responsibilities, and at a later stage for his political. France of the Revolution recognised, as clearly as did our statesmen after the passing of the Reform Bill, the need of educating the new political masters. But while the religious influence has remained specific up to the present day, the political soon lost its specific character, and left education to follow general lines. It would almost appear as if democracy had more faith in its specific principles than has religion, in England at any rate. For the unprecedented opportunity of propagandising offered by the common schools of the country has been practically neglected by the politician, while the ecclesiastics

have spent an enormous amount of energy and enthusiasm in the struggle to capture the schools for their particular denomination, or at any rate to prevent the other denominations from capturing them.

On the continent a freer use has been made of this enormous new power that has been opened up for the state, and the educational theory of the future has here one of its most difficult problems. How far is it desirable that the whole educational system of a country should be centralised, and placed under the control of the state? There are really two problems involved. First we have the purely educational question of the advisability of a uniform system throughout a whole country. Next we have the problem of the use to be made of the enormous power that is implicit in this centralised system.

In many of the continental nations, and particularly in France and Germany, the whole educational system of the country, secondary as well as elementary, is completely under the control of the state. In Germany while the universities are under state control they still retain a certain independence, their *Lehrfreiheit* is conserved. In France the university itself is a state institution. As a consequence, in these two countries we find a uniformity of teaching method and of educational administration that startles an Englishman or an American.

Monsieur A. Croiset tells us in his contribution to *Éducation de la démocratie* that all the care and attention that used to be expended on the education of the prince must now be transferred to the education of every individual citizen. It is curious, then, to note how little difference there is between the educational systems of Republican France and Imperial Germany, so far as their democratic aspects are concerned. In neither is any provision made for the normal passing of a pupil from the lower grade of education to the higher. Each pupil as he begins his educational course is at once "scheduled," as the Americans express it, for the rest of his course. If the pupil begins in the primary school he is practically expected

to stay there. "The primary school in France is in no sense a preparation for the secondary school."[1] In Germany the same system prevails, but there a demand has arisen for a change:

"Many of the leaders of the pedagogic world are crying out for the *Einheitsschule*—one school for all—and in some bright spots the system is actually at work. As the barriers of social life in modern Germany are broken down—as doubtless they will be—so will disappear the barriers between the various types of German schools."[2]

Curiously enough the Americans, who have the Einheitsschule, are not entirely pleased with it; their objections being well put in the following passage from Dr. A. C. Perry's *Problems of the Elementary School*:

"Into the same school, into the same classroom, we thrust those pupils to whom we wish to extend the opportunity of seeking a liberal education, and also those others, in the substantial majority, upon whom we are placing the duty of securing that minimum of instruction consistent with proper usefulness in a republic. We place these two groups of pupils, with such divergent interests, into the same classroom, under the guidance of the same teacher, and put them through the same curriculum, and then wonder at the confessed failure of the public school to prepare great numbers of its pupils for life."[3]

The cause of this unwholesome uniformity Dr. Perry finds in the unwillingness of the United States to recognise any form of caste. The Americans forget that there is such a thing as *natural* caste. They strongly protest against a boy being "scheduled" when he enters school, but they fail to note that every boy schedules himself by the *naturel* he brings with him. American education is

[1] F. E. Farrington: *The Primary Public School System of France*, p. 12. See also Cloudesley Brereton's *Comparison between English and French Secondary Schools*, p. 18, footnote, where he quotes from the Rapport Steeg "L'enseignement secondaire ne se superpose pas à l'enseignement élémentaire, il s'y juxtapose."

[2] R. E. Hughes: *The Making of Citizens*, p. 8.

[3] *Op. cit.* p. 12.

no doubt materially influenced by the consideration that it is "trying to prepare all American boys and girls for a life of unprecedented freedom,"[1] but it is more influenced by another idea that underlies the whole system. It would be an interesting and valuable bit of research for a doctor's thesis, to work out the effect on American education of the public realisation of the fact that every boy born in the United States is a potential tenant of the White House. In the race for the presidency all are expected to begin at scratch in the common school. It is true that the girls are barred, but the difference between no chance at all in the case of girls and the chance of, say, forty million to one, in the case of boys is so trifling, that it need not interfere with the uniformity of the common schools.

Obviously what is wanted in every country is a system that while making full provision for the great bulk of the citizens who will never need or desire higher education, will secure systematic and constitutional means by which candidates of promise may pass, without a rupture in their course, from the elementary stage to the secondary. In England at present the view is that a pupil who is going to take a secondary course ought to begin in a different way from one who is to have nothing but an elementary course, and that to enter on a secondary course when half way through a primary one, is certainly better than waiting till the end of the elementary course before starting the higher work, but is, on the most favourable view, only a second best. The Americans do not share this view, perhaps because their system is not so much dichotomised as ours, and certainly is not marked by the same social cleavage. Mr. R. E. Hughes may exaggerate a little when he says that "it is as difficult for a lad to pass from one [German] school to another as in German social life it is to rise from one class of society to another," but his statement emphasises that social force that tends to give the continental systems such rigidity.

Social influence is certainly very powerful in England,

[1] President Eliot: *More Money for the Public Schools*, p. 57.

but Anglo-Saxon individualism has hitherto worked against any very rigid national system of education beyond the elementary stage, and there is beginning to be a general recognition among the other educated nations that the somewhat unsystematic education found in England, and the uncentralised system prevalent in America, have certain advantages. The dead uniformity of the completely centralised continental systems is getting to be depressing to the continental nations themselves. There is no room for individuality either among teachers or pupils. Everything is sacrificed to "the system." Teachers complain that they are only cogs in the great wheel of the government machine. Probably the French and the Germans would be surprised if they knew that already in free America the pressure of the machine is felt, and that advanced educators are complaining that "the system" is crushing out individuality and initiative.[1] It is not so much that governmental regulations press heavily, as that the organic forces that were so oppressive in the prehistoric period are as vigorous in America to-day as they were in those distant times. But with all their complaint, the Americans have the most elastic educational system in existence in a great country at the present day. Our own England has and values a system in which there is a great deal of room for individuality. Our elementary system has certainly crystallised into rigidity, but it is freer than it was. The Board of Education is slowly taking a grip of the secondary system, but it is full of protestations that one of its chief aims in taking over secondary schools is to favour their individuality and to encourage the initiative of the teachers. Unfortunately it is of the essence of a machine to be mechanical, and there are many who look with misgivings at the increasing centralisation.

One of the chief defects of the great continental systems,

[1] See the remarkable pedagogic story by William Hawley Smith, entitled "*The Evolution of 'Dodd,'* giving his struggle for the survival of the fittest, tracing his chances, his changes, and how he came out." The whole is a polemic against "the system."

a defect pointed out by those who are engaged in administering them, is the enormous *vis inertiae* they acquire. So many vested interests grow up—both material and intellectual—that it becomes impossible to make the necessary changes that development of educational theory demands. The official attitude is that while administrative changes may be necessary at frequent intervals, there should be no need for alterations on the educational side. Indeed those in official positions tell us that all this chopping and changing in educational theory does not increase their faith in it. It seems a very reasonable proposition for the administrator to make to the educator: Find out for me which is the best system, and when you and your fellows have made up your minds on the point, we shall introduce that system as the universal one. What could be fairer than that? The history of the production of the *Ratio Studiorum*[1] of the Jesuits, may be taken as a type of what the educational administrator would like to see done at the present day. Let your educators make their experiments and have their debates. Give them ample scope and plenty of time. But once they have come to their conclusions let them give us a definite finding, and for ever after hold their peace.

Now it would not be difficult—in spite of the usual sneers about the differences of opinion among pedagogues—to produce a book containing a body of truths on which educators are all agreed.[2] But it would be a lean book,

[1] Cf. chap. x. of Thomas Hughes' *Loyola* in the Great Educators Series.

[2] At the present moment there is quite a marked tendency for books on the theory of education to take the form of a statement of the recognised results in the subject. It is becoming clearer every day that there is now a body of established knowledge that may be fairly claimed to form the groundwork of what is within measureable distance of being a science. There are now in English no fewer than five books, all of them recently published, bearing the same title—*Principles of Education.* Their authors, T. Raymont, W. C. Rüdiger, E. N. Henderson, F. E. Bolton, and W. F. Jones (all Americans except the first), set out such general principles as should enable any reasonably intelligent teacher to develop for himself a scheme of practical work.

and expressed in generalisations; and what governing persons want is a stout book with plenty of very definite practical instructions. The trouble is that administrators of education can hardly be got to realise that the important element in education is the teacher. Within the limits of the lean book of common agreement the principles of the science or art of education may be comfortably set down. But their application cannot be reduced within smaller compass than a life-sized class-room.

Perhaps the most important problem in the educational theory of the future is the place the teacher is to occupy. There are two possible lines of development. The first is that the nation may at last realise the importance of education, and may raise the profession to such dignity and honour as shall draw to it the best abilities in the state. The enthusiastic educator is never able to eradicate entirely from his dreams those philosopher-kings of the *Republic*, those schoolmasters who are made the rulers of men. Not the state actually described by Plato is really what the educational enthusiast would now desire, but a state in which the educator would have the consideration that underlies the Platonic conception. It is rather a humiliating reflection that in order to obtain the best educators it is necessary to give them great consideration. We would almost prefer the custom of the Talmudic times when the secondary teacher received no payment, but worked at a trade to earn his living[1] and taught for the love of God and the glory of teaching. He was paid entirely by the esteem he won from men, just as the secondary schoolmaster in Germany to-day receives a certain portion of his emoluments in the form of public honour. What is wanted is that the teacher should have the status of an educator, and that he should be worthy of

The books are expressed in generalisations, but they are not lean—Bolton's runs to 790 large pages. But this is because they expound the principles. The mere statement of the results could be put into quite a lean book.

[1] Letourneau: *L'Évolution de l'Éducation*, p. 367.

that status; that the public should bring to clear consciousness what we showed in our first chapter underlies the general view of teaching, and should grant to the person who combines the double function of teacher and educator the place in public esteem to which his high office entitles him. Perhaps in the future the old fact may be rediscovered, and strengthened by the statistical evidence that the future will no doubt demand, that a genuine educator educates as much by what he is as by what he knows. Direct education may come to its own in a way that it has not yet done. The influence of personality upon personality may be recognised as one of the essentials of real education, and then there may have to be careful search throughout the various countries for the men who are really worthy to be educators. Not every great man is great in the way that is essential in an educator. But one of the duties of the subordinate educational officials may be to invent tests for discovering those who are worthy to rank above them as real educators. There will in some form or other be a hierarchy of talents among the educators of the future.

But this hierarchy may be built up on quite other lines. The second possibility now to be described is less attractive in many ways, but it has in it the germs of actuality. It seems more like a development of influences already at work. There can be no doubt whatever that with the increasing amount of attention given to the subject of education there will result a great increase in the complication of the work to be done. With a careful survey of the whole field of operations, and the definite settlement of many of the problems that have hitherto remained insoluble, merely because they have never been properly stated, there will arise a degree of certainty in educational operations that at present are carried on largely on empirical lines, and with the greatest possible variety of detail. With the consolidation of the profession the need for originality on the part of the educator will diminish. Initiative has never been regarded as his strong point, but

in the future the need of initiative will be less marked than even at present. If this be the line followed, the profession will become the resort of third-rate men. Why should men of first-rate ability devote themselves to a profession that is so poorly esteemed, and gives so little scope for originality. In those days there may be full verity in Mr. Bernard Shaw's hard saying that at present has only enough truth in it to entitle it to rank as an epigram: "He who can does, he who cannot teaches."

Even a pessimist cannot sit still in view of such a prospect. It is inconceivable that the profession should reach this level of uniform dullness and sub-mediocrity. There must be room for some bright spirits, some equivalent to the philosopher-kings. Present tendencies do promise such an equivalent, but in a form that may rouse little enthusiasm. It would appear as if we had reached a stage in civilisation at which there is room for a new functionary in all departments, and in education no less than elsewhere. Turning to Auguste Comte we find the following significant passage:

"At the degree of development already reached by our intelligence the sciences are not applied directly to the arts, at any rate not in the most perfect cases; there exists between these two orders of ideas an intermediate order which, still vaguely determined in its philosophical character, is already more obvious when one considers the social class which is specially concerned with it. Between the *savants* properly so called and the effective directors of productive operations, there is beginning to be formed in our days an intermediary class, that of the engineers, whose special business it is to organise the relations between theory and practice."[1]

It may be pointed out how wide this term *engineer* is getting. It is applied to all sorts of mechanical work, always with the implied connotation that it represents the intelligent side of that work. Menotti, the specialist in chimneys, would nowadays be called a ventilating

[1] *Cours de Philosophie positive*, 1ère leçon, Exposition.

engineer. It is Dugas who makes the application[1] of the term to education, but he was anticipated in idea by Münsterberg who pointed out[2] the need for an intermediary between the practical psychologist and the practical teacher. Further, in practice he has been anticipated by the American school system in which the school superintendent or school supervisor[3] exactly fills the role of educational engineer. We have only to read Chapters IV. and V. of Bagley's *Craftsmanship in Teaching* to see how closely the school superintendent corresponds to the engineer in the passage from Comte. The following gives a very instructive insight into the functions of those whose business it is to make teachers work properly:

"As a young principal in a city system, I learned some vital lessons in supervision from a very skilful teacher. She would come to me week after week with this statement: 'Tell me

[1] *Le Problème de l'Éducation*, p. 30.

[2] "Do we not lay a special linking science everywhere else between the theory and practical work? We have engineering between physics and the practical working men in the mills; we have a scientific medicine between the natural sciences and the physician." *Psychology and Life*, p. 138. The name that Münsterberg gives to the intermediary between the practical teacher and the psychologist is "the educational scholar."

[3] English readers sometimes get a little confused between school superintendents and supervising principals. The head of a great city school system or a small one is a school superintendent, while the supervising principal has usually only one school to attend to. But the common element in all cases is that none of them do any actual teaching. As experienced teachers some of them do occasionally take a class by way of demonstration, but responsible teaching is no part of their work. In some of our huge elementary schools—in which the number of pupils approaches in some cases 2000—the head-master occupies somewhat the same position. But even in this case the responsibility of the teaching falls upon the head-master, and he is expected to do some teaching himself. The position is made clear by the action of one of the largest school boards in the country, under which there are specially large schools—it changed the title of the head-*master* in every case to that of head-*teacher*. There are, however, sufficient points of likeness between such head-teachers and the American supervising principal to enable English readers to understand the points to be made in the text.

what you want done, and I will do it.' It took me some time to realise that that was just what I was being paid to do—telling teachers what should be accomplished, and then seeing that they accomplished the task that was set."[1]

From the point of view of the evolution of educational theory one can hardly overestimate the importance of the state of affairs thus graphically described. We have before us, at a somewhat higher stage, the science of pig-iron handling. We have the lower intelligence of the acting class-teacher trained by the higher intelligence of the educational engineer, and the result may be supposed to be quite a considerable increase in the effective power of the class-teacher. Naturally a great deal depends on what the lady meant precisely by her question. She may have wanted only the most general statement of the results to be aimed at. This is rather suggested by the remark that she was "a very skilful teacher." No English headmaster would regard such a weekly enquirer as a skilful teacher. He would expect her to know the aims and methods of the school at a longer than a weekly range. We cannot suppose that the lady meant any detailed instructions as to methods, and if she did we may be sure that the author of *The Educative Process* with his exceptionally broad outlook was not the man to give them. No doubt

"The courses of study are becoming more and more explicit each year. Vague and general prescriptions are giving place to definite and specific prescriptions."[2]

But however detailed the official course of study may be, there must be a margin of freedom left to the class-teacher.

In the old schools, there used sometimes to be what was called a "discipline master" whose business it was to maintain order while others did the teaching. The problem has been set to a large class of post-graduate students in training to be teachers, whether it is possible to teach on the discipline of another, and the result of the discussion

[1] *Craftsmanship in Teaching*, p. 50. [2] *Op. cit.* p. 52.

was the opinion that it is possible to teach on the discipline of another, but not to educate on that discipline. The same question may be raised with regard to the educational engineer. Can the professional teacher, who is under the modern conditions definitely expected both to teach and to educate, conduct his work successfully while merely carrying out the ideas of another? There is an adjective that the Americans are getting very fond of in connection with lecturing, and to some degree with teaching. They divide lectures into two main classes, those that give solid instruction in subject-matter, and those that are "inspirational." Now one can imagine a school engineer doing admirable work along inspirational lines. This is usually the way in which our great English head-masters have exercised their influence. But somehow the ideas of engineering and inspiration do not go very happily together. The great engineer is very often himself inspired, but it is no part of ordinary engineering to inspire others. We must not, therefore, allow the mere term to affect our conclusions. The educational intermediary of the future may well be at the same time inspirational and directive.

It is the directive or prescriptive aspect of his work that demands our special attention, inasmuch as it involves a certain loss of initiative on the part of the direct teachers. Can the engineer in the background carry out his ideas through the direct teachers without unduly limiting their personality? At the present moment in this country the direct teachers are carrying on their work under a great variety of restrictions. Not one of them dares to be out and out himself. Everyone must in some direction or other take advantage of Kant's reluctant toleration of dissembling. Will a professional censorship interfere still more with the effectiveness of the teacher, or is there a possibility that it may come as a relief?

It looks as if in the future we may separate in thought the two functions of the direct teacher—the teaching function and the educative. So far as teaching is concerned, it may be quite necessary for the engineer to insist

upon uniformity of method. For example, in one of the huge schools to which we are getting accustomed, better teaching results will be obtained by the uniform adoption throughout the school of a somewhat inferior method, than by the introduction at different stages of the school course of several methods each intrinsically better than the one imposed from above. So far as his prescriptive power is concerned, the educational engineer will probably develop along the lines of teaching. Naturally this cannot fail to have its educative effect; but on the purely educational side he will probably find it to his advantage to depend on his inspirational influence, and leave the details to the direct teachers.

Education as such cannot well appear as a separate subject on the time-table of a school. It is the resultant of all the processes that go on there, and elsewhere. The teacher's personal influence appears throughout all the work of the day. Restrictions as to subjects and methods no doubt exercise their limiting powers, but in the last resort they are only the conditions under which the teacher's activity is exercised, and may be used by the teacher in such a way as to emphasise his individuality. The same method of presenting a subject may be adopted within a whole educational area, with the result that there is a great saving of time and effort that might otherwise, with the best intentions in the world, be misdirected. But at the same time an intelligent observer going around among the schools may find the greatest possible variety in the way in which the prescribed methods are applied. Generally speaking they are used in such a way as to get the full benefit of the ordered arrangement of items. If the teacher is mechanical and without marked individuality he may as well teach mechanically by a good method as by a bad one; while, if he be a man of some ability and resource, he will get the full benefit of the prescribed method, all the time using it in such a way as to give scope to his own personality. Direct education is always going on in school side by side with indirect.

When it comes to direct education we are always brought up by this consideration: is anyone worthy to be a direct influence in training the young, in being a model for them? We are apt to be depressed by the excellence of our ideals, forgetting that what is wanted is not a body of almost perfect men and women. Probably the future will find as the past has done, that the educators of any particular time are as good as it deserves. Still, for the common schools of the country it is obvious that the state must do all that it can to get the best material available. Only, it will probably realise more clearly than we do at present that what is wanted of our teachers is good average human nature, with good intellectual qualities and sound wearable virtues. A recently published book [1] gives the impressions of an emeritus Chief Inspector of Elementary Schools in England and Wales, of the qualities of the teaching staffs of the schools that were under his inspection during a long official career. His main complaint is that they are:

"machine-made, and that they are engaged in turning out machine-made scholars, some of whom in the fulness of time will develop into machine-made teachers." [2]

There are about 160,000 elementary teachers of all grades at work at the present time under the Board that this Inspector served. Out of these he has found one who comes up to his ideal. Giving her the fanciful name of Egeria he enters on a glowing account of her school and her work. Then he asks the pertinent question: "Where are we to find Egerias to man our elementary schools?" His answer is evasive: "For the moment this problem does not admit of a practical solution." But the solution suggested throughout the book is the application of the gospel of self-realisation and self-education. Though he is a sort of engineer himself, this inspector evidently hopes for salvation by an escape from the machine altogether. But the machine shows no sign of disappearing: the indications are all the other way. What the future has to do

[1] *What Is and What Might Be*, by Edmond Holmes. [2] *Op. cit.* p. 273.

is to improve the machine. In the educational engineer lies the immediate hope, if only he is left a sufficiently free hand. The ideal is no doubt an army of 160,000 Egerias, but since the man who had the best opportunities in the country for observation can discover only one, we can hardly hope for a rapid solution in that direction. Such a vast body must be made up mainly of ordinary average human beings. With the coming of the engineer there will be a stronger tendency than ever for this body to attract only average people, except the few who intend to become engineers themselves in due course. It is possible that after a long long course of engineers and average direct teachers, the world may be educated to the idea that only men and women of first-rate calibre should be allowed to become direct teachers. If this stage is ever reached it will be through a series of intermediate stages in which the number of engineers in proportion to the number of direct teachers is gradually increased, and a certain amount of actual teaching gradually introduced into the engineer's work. All the present indications, however, point rather to a future in which the profession will be made up of a great mass of men and women of a high level of average intelligence and virtue but without any special initiative, officered by a small body of highly specialised men and women of particularly high capacity and attainments, and with a large amount of initiative.

It is at least possible that this even system may result in a type of finished educand that may not be so attractive individually as it is useful from the point of view of the state. Already we have as the result of our machine-made teachers and our mechanical system the appearance of a peculiar type of child wherever the home influences are not strong enough to counteract the effect of the educational mechanism. This type has already a name on the other side of the Atlantic, but it is familiar on this side though as yet innominate. Professor W. Franklin Jones calls it the "institutionalised child," and points out[1] that

[1] *Principles of Education*, p. 170.

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such children are not confined to those who have been brought up in Orphans' Homes and Reformatories. What they lack is intimate contact with a partisan personality, with somebody who is always ready to be on their side, with, in a word, a mother. Under the increasingly centralised system that we have foreshadowed we find little promise in the future of a diminution in the number of institutionalised children. The tendency is clearly towards increasing the number, and intensifying the type. The children that are being educated under public control are being more and more reduced to a common pattern. This indeed is only a prominent example of a movement that is marked throughout the whole civilised world. The ease of communication and transportation is making very striking changes in all our social conditions. The force of imitation is as powerful as ever, and the ease of communication is weakening the separation between the smaller imitation areas within which special imitations formerly developed and acquired strength to oppose tendencies that arose outside of the areas. Civilised human beings are becoming daily more like one another all over the globe.

A national system of schools naturally tends to increase the standardisation within the nation. Apart from the uniform methods likely to be adopted under a centralised scheme, the subject-matter taught throughout the country is likely to be the same, and at first sight there seems to be no great harm in this uniformity. There is a great body of common knowledge about which there is no dispute, and there appears to be no material advantage in teaching it in different ways in different parts of the country. Take an innocuous subject like Arithmetic. Can there be any harm in finding a good text-book in this subject and prescribing it to all the schools in the country? Is there anything wrong with every child in the country learning the subject in the same way. Is there not, indeed, a certain advantage in social communication for the young person, from whatever part of the country he may come, to be able to depend upon his peers knowing exactly the same things

as he, and in the same way? All this leads to the general question of the advisability of standardisation. Most people are prepared to say at once that the growing sameness in dress and manners and speech is to be regretted. A great deal is said about the preservation of individuality. The problem has yet to be worked out: are the differences to which we are accustomed really advantages, or are they only picturesquenesses that are dearly bought at the price they involve of resistance to progress? We are not here directly concerned with the answer to this question: our interest is in the use to be made of the educational forces now placed at the disposal of the various governments. They are now in a position to secure standardisation in matters of mental content through the curricula of the schools. In general subjects this is a merely academic question, but when it comes to matters on which there is violent difference of opinion the question of school text-books becomes of political importance.

Take such a subject as History. Consider what an influence school text-books exercise here.[1] If a government cares to have a special set of books prepared, and prescribes them for use in school, it can bring up whole generations to its way of thinking. In particular, if it can secure a writer of some individuality with a taking style, it will gain its purpose even though the teachers are lukewarm on the subject, though the same could hardly be said if they are actively hostile.

Except in connection with religion there has been no systematic attempt to interfere with the text-books of this country in any partisan interest. On the continent text-books have been used to convey certain definite points of view. There have been of recent years certain incidents that at least suggest an attempt at the use of the schools as a political instrument. The wonder is that the tempting opportunities offered by an organised national system of education have been so little utilised. In this country the

[1] For an example of a biased history text-book see Sir John Lubbock's (Lord Avebury) *Addresses Political and Educational*, chap. iv.

commercial competition among publishers for the patronage of the schools has kept the text-books up to a very high standard of efficiency and fairness. With regard to the continental systems it would appear as if the whole organisation lay at the disposal of those in authority. In this country the saving of the situation has been that we are all so jealous of the power of the common school that we have taken care that no one should use it for private or illegitimate ends. Had the present organised school system existed at a time when it was not subject to the public scrutiny that is inevitable under our modern conditions with regard to the press, it would have been an irresistible force in the hands of an unscrupulous government.[1] As it is, however, on the continent, where they are supposed to be better able to keep the press in subjection than we are in England, we do not find the governments making any serious misuse of their power. The explanation is to be found no doubt in the very nature of education itself. The only way to manipulate it is to suppress it altogether. It always implies the development of intelligence and the spread of knowledge. The educands are certainly at the mercy of the educators to a great extent, but there can be nothing done through the educators without the educators being aware of what is going on. Any instruction given from headquarters regarding what is to be taught, must pass through the intelligence of the teachers. It is a practical safeguard of the freedom of the people that the teachers in a national system must be so numerous that they will among themselves provide a fair representation of the general feeling of the body politic; so that unless a government is able to carry with it a considerable body of public opinion it will find it impossible to introduce through the schools any important

[1] There can be no doubt that Napoleon, when he founded the centralised University of France, intended through its Grand Master, who of course owed his appointment to him, to mould the very minds of the new generation to suit his imperial policy. Had the empire lasted we should have had an educational experiment of the most interesting and important kind.

innovations of thought or practice. In the times of the old religious persecutions it was not always easy to keep up a sufficient supply of venal men to fill the official religious posts, and yet the number of men required in their case was small compared with the number of teachers required in a national system.

It is not that we are unaware of the possibilities of the common schools for the propagation of ideas not included in what is strictly understood by education. Everyone who has some pet means of social reform—temperance, nerve-hygiene, anti-vaccination, life-assurance, vegetarianism—is eager to have it included in the school curriculum. The flag-waving exercises so common in American schools, and so useful in districts where there is a large proportion of immigrants, are having their parallel in certain imperialistic rites that appear in some of our schools. But these are merely voluntary and isolated efforts whose only importance is in indicating the possibilities of the future. Since the time to be spent over the knife and fork studies will be materially reduced, and the remaining studies carried on in a more rational way, there will be a good deal of time to spare for work that the state may call upon the schools to do. They will therefore certainly play a very important part in the world-development that is going to be more than ever before in its history determined by conscious and deliberate pursuit of common ends.

The line of greatest interest is the relation likely to exist between the different nationalities in the future. In the meantime national education is a disintegrating influence in the world. Language, national literature, national music,[1] national customs and prejudices are all intensified within the imitation area of the nation. At present, however, there is an integrating world-force working against this nationalism. Not only is there the growing cosmopolitanism that is nourished by the enormously increased amount of travel and the rapidly increasing spread of world-news by cable, but there is the rising class interest.

[1] At Sparta the helots were not allowed to sing the national songs.

Patriotism, like Bagehot's "cake of custom," may have served its purpose, and other interests than those of place may dominate our future relations with our fellows. Without assuming any change in human nature at all, we may take it for granted that class interests may equal and even subordinate national interests. Men may have more common interests with their fellows in other lands than with their masters or their employees in this.

Hitherto the great drawback to the effectiveness of this "stratification," or integration by classes instead of by countries, has been the barrier of language, supported no doubt by the segregating power of the community of knowledge that characterises and welds together those who have been brought up in common. Here is the opportunity for the use of the schools. Suppose that a government arose that was really interested in favouring "stratification," and in removing the limitations of national isolation. With the schools at its disposal there is nothing to hinder it in a few years making its citizens effectively acquainted with some world speech agreed upon with other countries, some *Volapuk*, or *Esperanto* that would enable free intercourse to take place. Up till now these world-languages have had no chance. They have depended on the fitful humours of a few enthusiasts, and, however easy they may be to learn, they do demand some application, and this can never be gained from a whole people or large section of a people from a mere academic interest. All this would be changed if there were a clear political aim behind the language, and it were taken up in the schools as a part of the regular course. In the old times it used to be said with a kind of awe that even the emperor could not add a single word to the language. To-day any king or emperor or president could add a word to his language at a few months' notice, if only he had the necessary skill and were willing to do it unostentatiously enough; and a world-language could be added almost as easily.

According to the use made of them, the schools may thus either aid or retard the stratification and standardisa-

tion that are at present going on. Left to themselves they will favour standardisation within the nation, but oppose world-standardisation and stratification. It is quite possible, however, that society may take the matter in hand and use them in the interests of the wider expansion. We are no longer at the stage when institutions merely worked out their own evolution on the organic plane. We have the benefit of past experience recorded and philosophised upon. We have a view of the whole world, and not merely of our immediate environment. Further, even though human nature is held to be as selfish as ever it was, it has the advantage of knowing more, and being intelligently self-seeking. Men are therefore able to take themselves deliberately in hand, and seek to make of themselves something that they have not yet been. In the old times of cosmic education they were in the hands of Nature who has brought them to their present state of preparation for advance. The characteristic of the whole process has been the gradual acceleration of the rate of progress. For ages the progress was so slow that we have no record of it at all: then the rapid progress of the historical times: and now the amazing material progress during the past century, with the manifold openings that it offers for social advance.

All this suggests the possibility that, in the future, education may really do what it was always supposed to do in the past. It may begin to lead instead of merely following. We have seen that education is always following in the lines of social development. Can it be that with the knowledge we have acquired of the past, and of the way in which educational development has been accomplished, we are at last in a position to set out on a campaign of progressive education? But have we discovered any general line of advance? Is it not true that progress has been intermittent, and marked locally by stoppages and indeed by retrogressions? It is true that we have reached a point of vantage. We are able to envisage the whole field. Above all, we are now in a position to observe instantaneously any change at whatever point it may take place. Educa-

received little attention, and has had small chance of leading to practical applications. This may be called the disinterested aspect. It is sometimes said that education should be sought for its own sake, and not for any material, social or other secondary advantage. As a matter of fact education has been nearly always sought either for the personal advantage of the educand, or for the benefit of the society for which he is being prepared. No doubt there have been many cases in which culture has been sought for its own sake, for the delights of scholarship, for the joy of mere knowledge. But the love of learning for its own sake is rare, and is more frequently the result of long training than of original inclination. In any case, learning and education are not to be confounded. Education must always have an end to serve, and cannot therefore be regarded as quite disinterested. What writers like Comte and Ruskin complain of is the tendency to regard education as a mere means of enabling the educand to raise himself from his present social position to a higher, instead of merely fitting him to make the best of himself in whatever position he may be placed. Ruskin becomes violent in denouncing the use of education as a mere stepping-stone to social advancement:

> "The idea of an education which is to fit everybody to be Emperor of Russia, and provoke a boy, wherever he is, to want to be something better, and wherever he was born to think it a disgrace to die, is the most entirely and directly diabolic of all the countless stupidities into which the British nation has been of late betrayed by its avarice and irreligion."

Making due obeisance to the ideal underlying this protest, we may consider whether as a working principle it is practicable. Is it possible for people to be educated, as the phrase goes, "above their station" without seeking to move upwards? Let it be noted that there is a certain begging of the question here. It is assumed that there is an education suitable for each social grade. Now this is the very point at issue. No doubt as matters stand at present there is a certain amount of specific preparation necessary to

enable the educand to be quite at home in any given social grade. But what is really implied above is that the various social strata have each its level of culture above which it cannot rise. But there is no real causal connection between social status and capacity for culture. Opportunity is a different matter.

The interested motive in education has always been of fundamental importance in the world, but it may not be too extravagant to say that in the immediate future it is likely to reach its zenith. We have already noted the enormous power at present placed within the grasp of governments through the current centralised system of national education. We have further seen that the governments are rather afraid to use this powerful engine, the reason being that the people have become educated at least up to the point of knowing the importance of education. There remains, however, one final step to be taken in the education of the people, a step that will not be taken till the demand comes from the people themselves, and when the demand is made and granted, we shall have one of the most important experiments ever made in the working out of educational theory.

"It is not yet clearly perceived by the people that there is not any more natural and lasting distinction between the *educated* and the *uneducated* classes of which we hear so much nowadays, than there has been between the other classes in the past. Citizen and slave, patrician and plebeian, feudal lord and serf, privileged classes and common people, leisured classes and working masses, have been steps in a process of development. In the 'educated classes' and the 'uneducated classes' we have only the same distinction under a subtler and even less defensible form; for the right to education in its highest forms now remains largely independent of any other qualification than the possession of mere riches to secure it; it constitutes, in fact, one of the most exclusive, and at the same time one of the most influential, of the privileges of wealth."[1]

The ready answer to this is that at present the scholarship system enables every child of intellectual promise to

[1] Benjamin Kidd: *Social Evolution*, p. 249.

obtain the best education available in the country. Huxley's figure has captured the popular imagination. He describes an ideal school organisation as "a great educational ladder with one end in the gutter and the other in the university."[1] *The educational ladder* is a recognised phrase in our educational vocabulary. We are rather proud of it. One of our English educational monthly magazines has a permanent section under this title. The general opinion is that the ladder is more than sufficient. Educational authorities point out to each other that so far from there being any difficulty in a poor boy obtaining a scholarship, it is impossible to get candidates of sufficient ability to warrant the awarding of scholarships, and in some cases the number of scholarships originally offered has had to be reduced, on the ground that there was not a sufficient supply of candidates qualified for them.

Here are in place the remarks of Lester F. Ward on the economics of education:

"Education is the one kind of human enterprise that cannot be brought under the action of the economic law of supply and demand. It cannot be conducted on 'business principles.' There is no 'demand' for education in the economic sense. The child knows nothing of its nature, and the parent rarely desires it. Society is the only interest that can be said to demand it, and society must supply its own demand."[2]

What we are interested in at present is the probable future demand of a section of society for equal educational rights in the widest sense of that term. No doubt in the future as in the past and present it will be a very small minority of the individual members of society who will take advantage of the educational privileges the state may offer. It is highly probable that the vast majority of men

[1] For an excellent analysis and criticism of the implications and applications of the ladder metaphor in connection with the American educational system see Dr. Arthur C. Perry's *Problems of the Elementary School*. By graphic and other illustrations he shows the enormous waste involved in the single ladder. He wants many ladders.

[2] *Pure Sociology*, p. 575

into whatever station in life they are born neither desire nor are fitted for high intellectual education.[1] There could be no greater mistake than to suppose that at present the children of the wealthy receive a high intellectual training. They are almost all sent to places where such a training is to be obtained if they have the desire and the capacity for it. But what they all do get, whatever happens, is a social education, an education that gives them an advantage over the poor student, whatever his intellectual attainments. So far as mere intellectual education goes, the poor man—often at a ruinous cost it is true—may, and frequently does outstrip his wealthy competitor, but he is always handicapped in the after struggle by the lack of the necessary social education. For certain posts he is, under present conditions, really unqualified. The problem is whether the future will be able in any way to eliminate this final disadvantage of initial poverty.

There are two possible ways in which the case may be met. By a system of early selection of the most promising educands, and by providing them with a suitable social as well as intellectual education, it may be possible for the state to get the best service from its citizens, while every individual born into the state may have his chance of full self-realisation. Such a scheme involves, however, a break between the educand and "his people." The family may here form the rock on which the scheme will split.

There is another quite different, and on the whole more likely line of development. In a democracy, a higher education, as we understand that term, may cease to have its present social prestige, and may therefore lose all but its intrinsic attractions. With specific education carried to a high pitch, each man may feel that his store of knowledge is sufficient to maintain his self-respect, even though he has not acquired certain kinds of knowledge that at present are regarded as essential to anyone who claims to rank as educated. There will always remain a floating

1 "Most men are not intended to be any wiser than their cocks and bulls." See *Fors Clavigera*, viii. 257-8-9.

mass of knowledge of a general kind that is supposed to be common to all intelligent people. There must be this fringe of Humanity if people are to maintain the amenities of life. But relief will no doubt be found in the introduction here of division of labour. People will not be called upon to pretend to be grounded in all the humanities as at present—to know the ancient classics, to be familiar with literature ancient and modern, to have a mastery of two or three modern languages, to be well acquainted with the drama, and to have an adequate command of the technique of criticism in art and music. The serious study of these subjects will no doubt in the future as in the past demand a great expenditure of time, and those only who start with the advantage of wealth will be able to afford the necessary time, except in the case of those who master those subjects as professional crafts. There may thus always remain, in a sense, the distinction between the educated and the uneducated classes, only this cleavage of society will not coincide with that permanent cleavage represented by the other pairs that are contrasted in the quotation from Mr. Kidd. In particular, the educated classes will not correspond to the governing classes.

The fact is that the very terms are here misleading. As the matter has been presented above, the contrast is not between the educated and the uneducated, but between the instructed and the uninstructed ; with the further limitation that the instruction is confined to certain subjects of no practical but of high conventional value. The distinction between education and instruction with which this book started has remained prominent throughout, and meets us again at this last stage. Democracy will claim, and will no doubt receive, perfect equality in the matter of higher education, and when this comes about it will be true to say that the distinction between the educated and the uneducated classes has disappeared, since all will have an education suitable to the state to which their inclinations and capacities have called them. There will remain as before the distinction between the cultured and the uncultured classes

as determined by the appreciation of humanistic instruction. But there will be cultured people in all grades of society, and every grade of society will have then, as now, its uncultured section. The line of cleavage will not be caused by wealth or social distinction, but by capacity and inclination.

INDEX

Acquired characteristics, transmission of, 53 ff., 318, 357.
Advance in education, relative and absolute, 96.
Advice, Sir W. Petty's, 13.
Aesthesiometer, 353 ; tests, 212.
Afterthought explanations, 76.
Agricultural Colleges in America, 245.
Aim of education, 38 ff., 162.
Alexander, the Great, 16.
Alexander, F. Matthias, 29.
Allen, J. W., 81, 82.
American view of self-realisation, 146 ff., education, 375-7.
Anticipatory education, 394.
Aristophanes, 272, 370.
Aristotle, 3, 4, 16, 79, 95, 96, 98, 138-40, 148, 156, 167, 229, 260, 261, 357.
Arithmetic, 388.
Arnold, M., 117.
Arnold, Thomas, 63.
Artificial education, 30.
Ascham, Roger, 172, 175, 262.
Astigmatism, 365.
Athens, 135, 136, 139, 142, 144, 183-4, 264.
Atlantis, New, 370.
Augustine, 90, 91, 358.
Averages, 354.

Bacon, 61, 79, 101, 231, 370.
Bagehot, Walter, 91, 109, 110, 128, 259, 322, 392.
Bagley, W. C., 5, 6, 87, 120 *note*, 132 *note*, 171 *note*, 223, 224, 345, 382, 383.
Bain, Alex., 321, 352.
Baldwin, J. M., 38, 336.
Beaumont, Chr. A., 255-6.
Beneke, Friedrich, 337-8.
Bennett, Arnold, 314.
Bergson, Henri, 72, 75.
Berlin University, 88.
Bertrand, Alexis, 17, 190, 192.
Bible, 202, 241, 251.
Bi-morality, 394-5.
Binet, Prof. Alfred, 302, 303, 304, 359, 360 *note*.
Bi-polarity of education, 18 ff.
Bi-polar process, 105.
Bismarck, 211.
Blake, 119.
Bloomfield, Meyer, 365 *note*.
Bluntschli, J. C., 90 *note*.
Board of Education, 377.
Bolton, F. E., 82, 378 *note*.
Bon, Gustave le, 223.
Born-not-made theory, 169 ff.
Boston Vocational Bureau, 365.
Brereton, Cloudesley, 375 *note*.
Brook Farm Community, 272.
Brown, Dr. Wm., 360 *note*.
Browning, Oscar, 154, 251, 276.
Browning, R., 74, 371.
Burbank, Luther, 311.
Burne-Jones, Edward, 15.
Butler, Samuel, 274.

Caird, Edward, 5, 48, 197, 266.
Cake of Custom, 392.
Cambridge, 304 *note*.
Capacity, 303, 304, 356 ff., 372.
Carlyle, 169.
Caste, 375.
Castiglione, 173, 174, 184.
Categories of education, 30 ff., 184.
Centralised education, 374.
Chambers's Information, 199.
Character, 46; the empirical and intelligible, 47, 50.
Chesterfield, Lord, 125, 178.
Chesterton, G. K., 214 *note*.
Childhood, 63.
China, 394.
Christian gentleman a technical product, 216.
Christianity, 96, 148, 149, 156, 294.
Chronological order of educational theories, 100.
Cicero, 98, 232.
Circle of thought, 327, 328.
Citizenship, training for, 163.
Claparède, 69.
Clark, W. G., 211.
Classification of children by ages, 69; of educational theorists, 101; of the sciences, 193; unsatisfactory to humanists, 229; fallacy of, 361; function of, 362.
Co-education, 281.
Co-efficients, 359, 360, 361, 362, 372.
Coenobitism, 149.
Collective education, 32.
Colour-blindness, 365.
Columella, 231.
Colvin, S. S., 222 *note*.
Comenius, 101, 198, 237, 262, 267, 268, 286, 289, 290.
Compayré, G., 50, 254, 270, 281, 352.
Complete English Tradesman and *Complete Gentleman*, 174.
Comte, A., 68, 90, 189, 194 *note*, 257, 381, 382, 396.
Concentric method, 67.
Condillac, 236, 310.
Condorcet, 357.
Consciousness, the science of, 25; incidence of, 26; no interpenetration of, 89; elimination of, 223-4.
Constable, F. C., 170.
Contrariance, 114.
Convention, 113 ff.
Correlation formula, 221.
Cortegiano, Il, 173.
Cosmic education, 31, 33, 83 ff., 92, 104, 105, 301.
Cosmological perspective, 86.
Cowper, 263.
Cramer, Ph., 253, 255.
Croiset, A., 374.
Cromwell, 35.
Culture aspect of education, 240 ff.
Culture subjects as teachers' stock-in-trade, 248-9.
Cumulative effect of education, 55, 357.
Curriculum, 184, 209, 213, 215, 231, 237, 263, 362.
Cyclopic period, 132.

Dalton, 372.
Dante, 93.
Darroch, Prof., 216 *note*, 226.
Darwin, Charles, 74, 108.
Davenport, Dr. E., 245, -6, -7, 371, 372.
Davidson, Dr. John, 323.
Decay as part of evolution, 79.
Definition in teaching, 197.
Defoe, 174.
Demand for specific education, 166.
Democracy, 400.
Démocratie, Éducation de la, 374.
Demolins, Edmond, 63, 281.
Descartes, 43, 189, 192, 194 *note*, 313, 315.

Desire in relation to will, 332 ff.
Development, 79; as unfolding and absorption, 323.
Dialectic, Platonic, 1.
Didactica Magna, 267, 286.
Diderot, 9, 253 *note*.
Direct education, 31, 380, 385.
Disciplinarians, 340; disciplinary view, 200.
Discipline-master, 383.
Discreditable education, 125.
Disintegrating force, 391.
Dissembling of educator, 38.
Double morality, 394.
Drill, 204.
Dryden, 259.
Dualism, 83, 294, 324.
Dugas, L., 67, 115, 158, 191, 193, 302, 382.
Dullness of teachers, 115.
Duration of education, 69 ff.

Échelle de l'intelligence, 303.
Economics of education, 398.
Educability, 57.
Educand, 13; highest attainment possible for, 300.
Educatee, a nonce-word, 13.
Education, as speculative philosophy, 3; *v.* teaching, 9; J. S. Mill's definition of, 10-11; equivalent words for, 14; its bi-polarity, 17; subjective and objective, 21; as unconscious, 26; formal and informal, 30; natural and artificial, 30; cosmic, 31; direct and indirect, 31; individual and collective, 32; unit of, 65; premature, 67; as instinctive, 106; as following not leading, 115; for evil, 125-6; as adjustment, 128, 187; *ad hoc*, 162, 171; culture aspect of, 240; a mystery, 297; as touchstone, 325; for leisure, 370; centralised, 374; on the time-table, 385; as leading, 393; as disinterested, 396-7; as social distinction, 397 ff.; in relation to economics, 398.
Education Department, 303, 394 *note*.
L'Éducation Nouvelle, 63.
Educational engineer, 385 ff.
Educational ladder, 242, 398.
Educative instruction, 213.
Educator, the, to make himself dispensable, 20; as technical term, 12.
Efficiency, the cult of, 242 ff.
Ego, the eternal, 325.
Einheitsschule, 375.
Eliot, George, 120 *note*.
Eliot, President, 376.
Elyot, Sir Thomas, 173.
Émile, 177, 253-4, -5, -6, 259, 273, 274.
Emotional element in formal training, 224.
Encasement theory, 290, 298.
Engineers, 372-3, 381, 384.
English public schools, 153-6, 216, 281.
Enlightenment, the, 280, 320, 321.
Enseignement, 17.
Enseignement Intégral, 190, 192.
Environment, 51, 58, 187.
Epistemology, 187.
Ergograph, 353, 359, 360 *note*.
Erziehender Unterricht, 339.
Esperanto, 392.
Espinas, 108.
Ethology, 322.
Eton, 15, 165.
Eugenics, 52, 58, 356.
Evolution, 358.
Evolution of idea of ego by Herbart, 324.
Evolutionists, 11.
Experimental pedagogy, 353.

Fact into faculty, 195.
Factitious problems in education, 226.

Faculty, the implanting of, 323.
Faculty psychology, 212-13.
Farrington, F. E., 375.
Fatalism, 325.
Fatigue Intellectuelle, La, 360.
Fechner, 353.
Fichte, 47, 88.
Fifth Century B.C., 96, 135, 358.
Findlay, J. J., 63.
Flint, Prof., 73 *note*, 146 *note*.
Fogeyism, 66.
Follow nature, 267 ff.
Foot-rule, Prof. Spearman's, 302.
Formal Education, 30, 31, 184.
Formalism, 229.
Formal Training, 32, 185, 210 ff., 232, 238 ff.
Fortoul, le Système, 192.
Fotheringham, James, 176.
Fouillée, Alfred, 45.
Fractional Education, 32.
Freewill, 81.
French Revolution, 373.
Froebel, 64, 264, 275, 276, 279, 284, 286 ff.

Galton, F., 169, 170.
General education, 32, 182-3, 241.
General habits, 219.
Genius, the, 76, 117 ff.
Gens du métier 9, 321.
Gesinnungsunterricht, 98, 340.
Goethe, 150, 276-9.
Gordon, Mrs. M. Ogilvie, 365 *note*.
Gouvernour, the, 173.
Graves, F. P., 217 *note*.
Gray, 170.
Greek, 240, 243.
Greek teachers at Rome, 142-3.
Groos, Karl, 64, 107.
"Growing point," 308.
Guimps, de, 287.
Guyau, J. M., 120 *note*.
Gymnastic, mental, 215.
Gymnastics, 204 ff., 217.

Habits, general, 219, *ad hoc*, 220.
Hall, G. Stanley, 127 *note*, 261.
Halleck, R. P., 320.
Hamilton, Sir W., 2 *note*.
Hanus, Prof. Paul, 246.
Hartog, P. J., 364.
Hayward, F. H., 56, 57, 117, 221, 264.
Heber, Bishop, 259.
Heck, Prof. W. H., 222 *note*, 224.
Hegel, 16, 46, 77, 129, 140, 288.
Helvétius, 315.
Henderson, E. N., 378 *note*.
Henri and Binet, 360 *note*.
Herbart, J. F., 47, 48, 62, 80, 98, 216 *note*, 322 ff.
Heredity, 51 ff.; social, 58 ff.
Herkomer, Sir H. von, 176.
Herodotus, 79.
Hesiod, 78.
Hierarchy of talents, 380.
High Schools *v.* Trades Schools, 245.
Hill, Alexander, 212.
History as science, 73, 80, 81.
History of education, 9.
History text-books, 389.
Hobbes, T., 91, 148, 264, 265.
Hobhouse, L. T., 84, 92.
Höffding, Harald, 123 *note*, 255 *note*, 294.
d'Holbach, 123 *note*, 260, 266, 315, 316, 318.
Holman, H., 186.
Holmes, Edmond, 386-7.
Holmes, Oliver Wendell, 311.
Homer, 143.
L'Homme Plante and *L'Homme Machine*, 311.
Horne, H. H., 54, 78, 358.
Hughes, R. E., 375, 376.
Hughes, Thomas, 378 *note*.
Human education, 31, 33.
Humanism *v.* Naturalism, 229-30.
Human Machine, The, 314.
Humours, classification of temperaments, 43.
Huxley, T. H., 30, 31, 79, 85,

211, 265, 266, 269, 274, 314, 358.

Idealism, the larger scope of, 290; assumption underlying, 291 ff.
Ideals in relation to formal training, 223.
Ideas, as dynamic, 196, 323, 324, 333.
Imitation, 110 ff.
Immutability of character, 48 ff.
Incidence of consciousness, 26.
Indirect education, 31.
Individual and race, 358.
Individual education, 32.
Individualistic forces, 133.
Informal education, 30.
Information fallacy, 199.
Inhibition, 27; in monasticism, 151; in education generally, 257.
Innéisme, 298-9.
Inspirational teaching, 384.
Instinct in education, 106 ff.
Institutionalised child, 387.
Instrumental education, 163.
Integral education, 32, 189 ff., 193-195, 258.
Integrating force, 391.
Intellectual education, 399.
Interest, 340; many-sided, 40, 341 ff.; complementary to self-realisation, 344, 368-9.
Interpenetration of social classes, 145.
Ischomachus, 175.

Jacotot, 24, 60, 120, 297.
James, Prof. W., 66, 72, 107, 219, 317, 319.
Jansenists, 152, 256.
Japanese education, 88, 304.
Jeremiah, 53.
Jesuits, 70, 152, 262, 378.
Johnson, Dr., 96.
Jones, Sir Henry, 56.
Jones, W. Franklin, 5, 378, 387.

Kant, 38, 47, 48, 69, 115, 288, 325, 384, 394.
Katharsis, 316-8.
Kayssler, Prof., 277.
Keatinge, M. W., 216 *note*, 286 *note*.
Kidd, Benjamin, 131, 397, 400.
Kikuchi, Baron Dairoku, 89.
Kindergarten, 286, 290, 296, 297.
Kingdom of ends, 75.
Kipling, 284.
Knife and fork studies, 16, 244; too much time spent on, 246, 391.
Knowledge, place in educational theory, 160 ff.; as organon, 186; as mere information, 188, 198; dynamic power of, 194-5; in relation to morals, 326.

Labour and Culture, 371.
Lack of ancient educational records, 122 ff.
La Mettrie, 294, 311, 312, 313.
Lange, Prof., 157.
Langguth, 277 *note*.
Lankester, Sir E. Ray, 41, 57, 294.
Latin, 209, 210 ff., 221, 240.
Laurie, Prof., 100.
Lavisse, Ernest, 193.
Learning, 151, 156 ff.
Lehrfreiheit, 374.
Leibniz, 323, 326.
Lessing, 105.
Letourneau, Ch., 108, 121, 123 *note*, 281 *note*, 379 *note*.
Lewis, Dr. E. O., 222.
Liberal education, 178, 179, 204, 240, 247.
Lilienfeld, Paul von, 89.
Locke, 22, 101, 328, 334, 335.
Lotze, 44, 67, 92, 93.
Louis XIV., 167.
Lubbock, Sir John (Lord Avebury), 16, 111, 209 *note*, 244, 246, 389 *note*.
Lucretius, 79, 372

Lux Mundi, 158.
Lycurgus, 135, 141.

Macdougall, William, 91, 108.
Machiavelli, 125, 174.
Machine, 8, 311 ff.
Machine-made teachers, 386.
Manilius, 136.
Man-making, 104, 306-8, 323.
Many-sided interest, 40, 341 ff.
Marshall, H. R., 107.
Material education, 31.
Materialism, 250, 294, 310, 320.
Materialists, French and German, 320, 321.
Maurice, F. D., 199.
Maximal periods in education, 99 ff., 352.
Meiji, 88.
Memory training, 220.
Mendel, 299.
Menotti, 381.
Menschenerziehung, Über die, 289 ff., 296.
Mental equipment for certain vocations, 364 ff.
Merz, 277 *note*.
Metric system, 394 *note*.
Mill, J. S., 10, 11, 30, 35, 322.
Milton, 177, 231, 370.
Moleschott, 321.
Molière, 313.
Monads, 313, 323.
Monasticism, 148 ff.
Monroe, Paul, 101, 352.
Montaigne, 100, 101, 178, 258.
Morals, in relation to knowledge, 326 ; standard of, 395.
Morgan, Prof. Lloyd, 107.
Moseley, Inspector, 246.
Mothe le Vayer, 167.
Moutonisme, 114.
Müller, Max, 17.
Münsterberg, Prof., 320, 364, 382.
Murray, Sir J., 13.
Myers, C. S., 360 *note*.

Napoleon, 88, 260, 390 *note*.
Nationalism, 391.
Nature, 105, 109, 115, 259 ff. ; "follow nature," 267 ff. ; nature's discipline, 274, 393.
Natural education, 30.
Naturalism one of the extremes of Humanism, 233.
Naturel, 45, 46, 51, 298, 301, 359, 362, 369.
Nature study, 263, 280.
Negative education, 255 ff., 299.
Newton, Sir Isaac, 352.
Nietzsche, Friedrich, 370.
Noble savage, the, 259, 273.
Nordau, Max, 77 ff., 89.
Nurture, 16 ; theory, 186 ff., 200.

Objective character and will, 335 ff.
Objective education, 21, 92.
Objective standard in education, 352 ff.
Occam, 310.
Oppression of individual by the state, 129.
Oratory, Institutes of, 168, 171.
Organism, nature of an, 284 ff.
Originality, 117, 119.
O'Shea, Prof., 188 *note*.
Oslerism, 66.
Oxford, 304 *note*.

Paidocentric attitude, 261.
Palace School, 208.
Pascal, 290.
Passivity of Froebelians, 297.
Payment by results, 125.
Payot, Jules, 47, 351.
Pearson, Dr. Karl, 221, 360 *note*.
Peculium, 145.
Pedantry one of the extremes of Humanism, 233.
Pentathlon, 218.
Pérez, Bernard, 70 *note*.
Pericles, 357.
Perry, A. C., 375, 398 *note*.
Personal card, 359, 360, 361.

Personal influence of educator, 33 ff., 380.
Pestalozzi, 88, 178, 254, 275, 286 ff.
Petty, Sir Wm., 13, 14.
Philosopher-kings, 370, 379, 381.
Pig-iron handling, 366 ff.
Pillsbury, W. B., 220.
Plant metaphor, 285 ff.
Plastic period, 66, 68, 71.
Plato, 1, 2, 4, 16, 91, 95, 96, 98, 101, 136-139, 144, 148, 156, 217, 239, 262, 284, 356, 357, 370, 379.
Poet born not made, 169 ff.
Politics and education, 3.
Polonius, 37.
Port-Royalists, 152-3.
Positive education, 255, 257.
Practical, 2.
Practice and theory, 4 ff.
Predestination, potential, 298.
Prelude, The, 175-6.
Premature education, 67.
Prévost, Marcel, 191-2, 302.
Preyer, W., 70.
Priests as educators, 122-4.
Private interest in education, 164.
Professionalism, 145, 239.
Progress, the idea of, 78 ff., 293.
Prussia after Jena, 88.
Psychology, 25, 68 ; of the group, 89, 144, 320.
Psycho-physicists, 353.
Public schools (English), 153-6, 216, 281.
Pufendorf, 265.
Pupil, 14.

Quadrivium, 183.
Quantitative method, 353, 359.
Queyrat, Frédéric, 46.
Quick, R. H., 100, 102.
Quintilian, 98, 168, 169, 171-2, 262.

Rabelais, 101, 159.
Race suicide, 94.
Raehrich, Edouard, 68.
Ratio Studiorum, 378.
Ratke, Wolfgang, 124.
Raymont, T., 378 *note*.
Reaction against Humanism, 101 ; against Scholasticism, 160.
Reaction time, 365.
Real, the Herbartian, 323, 325.
Realism, 234 ff., 250-1, -2.
Reden an die deutsche Nation, 88.
Re-education, 29.
Reform Bill, 373.
Regression, 53.
Reid, 336.
Renaissance, 96, 98, 99, 100, 101, 102, 230, 294.
Repairing the will, 351.
Reproduction as test in teaching, 197.
Republic, Plato's, 5, 66, 132, 136, 138, 217, 255, 262, 277, 379.
Rhodes Scholarships, 364.
Rhythm, in history of education, 255 ; of thesis, antithesis, and synthesis, 305.
Ribéry, Dr. Ch., 20, 362.
Ribot, Th., 120 *note*.
Richter, J. P., 64, 70, 90.
Ritchie, Prof., 57.
Robinson Crusoe, 272-3.
Robinson, J. H., 86.
Rome, 87, 141 ff., 294.
Ross, Prof. E. A., 91, 113.
Rousseau, 67, 69, 91, 97, 101, 177, 178, 252 ff., 258 ff., 288.
Royce, Prof., 37, 219, 257.
Rüdiger, W. C., 378 *note*.
Ruskin, 164, 363, 396, 399.

Safeguards against political misuse of education, 390.
Scènes de la Vie de Bohème, 171.
Schäffle, 89.
"Scheduled" for education, 374.
Schmidt, Heinrich, 86.
Scholarship, pure, 232.

Scholasticism, 156 ff., 230, 252.
Scholastics, 229.
Scholemaster, The, 172, 262.
School of Navigation, 166.
Schoolmen, 260.
School superintendent or supervisor, 382.
Schools as political instruments, 389.
Schopenhauer, 30, 48 ff., 265 *note*, 321.
Scientific stage in education, 99, 354.
Sectional education, 32.
Self, the social, 90.
Self-consciousness, 361.
Self-education, 23, 315, 361.
Self-effacement of educator, 36.
Self-expression, 146.
Self-realisation, 40, 130, 145, 146 ff., 299, 341 ff.; complementary to many-sided interest, 344, 368.
Self-sacrifice, 130.
Seminary ideal, 247.
Seneca, 98.
Shakespeare, 72.
Shaw, G. B., 11, 55, 299, 381.
Shelley, Mrs., 117.
Shelley, P. B., 233 *note*.
Simon, Jules, 190.
Simple Life, the, 272.
Sinclair, May, 176.
Sinclair, S. B., 36.
Slave education, 183-4.
Sleight, Dr. W. G., 222.
Smith, W. G. Pogson, 263.
Smith, Wm. Hawley, 377.
Social education, 399.
Socialistic forces, 133.
Social heredity, 58 ff.
Social influence in education, 376-7.
Social progress opposed to cosmic, 265.
Socrates, 97, 132, 136, 217, 260, 264.
Sophists, 164, 165.
Sorley, Prof., 251.
Soul, the Herbartian, 323; the Benekian, 337-8.
Soul content, 196.
Sparta, 70, 135, 141, 142, 218, 391.
Spearman, Prof., 221, 302, 360 *note*.
Specialisation, 178 ff.
Specific education, as beginning and as goal, 224; as moral training, 317.
Spencer, Herbert, 50, 51, 96, 178, 195, 200, 210, 239, 270, 279, 294, 321.
Spontaneous education, 68.
Stael, Madame de, 193.
Standardisation, 388-9, 393.
"Standards" in elementary schools, 303.
State prior to individual, 136; as divine power, 140.
Statesman and educator, 3.
Status of the educator, 355.
Steeg, le Rapport, 377.
Stephen, Sir Leslie, 90.
Stout, Prof., 324, 338.
"Stratification," 392.
Subjective character and will, 335 ff.
Subjective education, 21, 92, 315.
Subordination of present to future, 129 ff.
System, the, in education, 377.

Tachistoscope, 353.
Tarde, G., 91, 108, 110, 298, 322.
Tarver, J. C., 211.
Taylor, Frederick W., 366.
Teaching, *v.* education, 9; in relation to learning, 37.
Teacher *v.* educator, 12, 17.
Teacher born, not made, 170 *note*.
Technical education, 181; of Christian gentleman, 216; of Greek citizen, 239.
Technological training, 181.

Temperament, 43 ff., 318.
Temptation, 327.
Text-books, partisan, 389.
Theory, 2; Theory and practice, 4 ff.
Things and words, 234 ff.
Thorndike, Prof., 214, 216 *note*, 360 *note*.
Time as an educational datum, 62.
Titchener, Prof. E. B., 319, 353, 360 *note*.
Toxophilus, 175.
Tractate on Education (Milton), 177.
Trainers, 102.
Training, 16, 102, 201 ff., *ad hoc* 206.
Transcendental freedom, 325.
Transference, the doctrine of, 207, 222-3, 353.
Trivium, 165, 183.
Twain, Mark, 313-4.
Types of attention, 365.

Uberweg, Friedrich, 48.
Ufer, Chr., 203 *note*.
Unconscious education, 26.
Uniformity, of method, 385; of human type, 388.
Unit of education, 65.
University, 3, 209, 227, 247, 374, 390 *note*.
Unsolved problems in education, 354.
Usable common elements, 222 *note*.
Useful Knowledge, Society for the Diffusion of, 199.
Utilitarian, curriculum, 215; scheme, 350; stage, 352.
Utilitarianism, 322.

Varro, 231.
Vocational bureau, 363.
Vocational education, 180 ff., 224, 243, 363.
Vocational guidance of youth, 365 *note*.
Volapuk, 392.
Volonté de tous and *volonté générale*, 91.
Voltaire, 254.
Vitruvius, 231.

Wagner, Dr. Ludwig, 212.
Wallas, Graham, 76, 91.
Ward, Lester F., 34, 80, 398.
Watson, Prof. Foster, 165, 166.
Watts, Dr. I., 260.
Weber, 353.
Weismann, 54, 55.
Wesley, John, 349.
Westminster, 165.
Wilhelm Meister, 276 ff.
Will, implied in connotation of education, 10; in relation to progress, 80; genesis of the, 328 ff.; memory of, 337; training of, 348 ff.; breaking of, 349; repairing of, 351.
Winch, W. H., 222.
Winchester, 165.
Woodward, W. H., 174.
Words and things, 234 ff.
Wordsworth, 175-6, 264, 273.
Worlds, the two, 196-7.

Xenophon, 138, 168, 175, 272, 370.

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